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The Torch-Bearers

The Torch-Bearers

Vol. I.

THE WATCHERS OF THE SKY

BY

ALFRED NOYES

FIFTH IMPRESSION

William Blackwood & Sons Ltd. Edinburgh and London 1933

PREFATORY NOTE.

THIS volume, while it is complete in itself, is also the first of a trilogy, the scope of which is suggested in the prologue. The story of scientific discovery has its own epic unity—a unity of purpose and endeavour—the single torch passing from hand to hand through the centuries; and the great moments of science when, after long labour, the pioneers saw their accumulated facts falling into a significant order—sometimes in the form of a law that revolutionised the whole world of thought-have an intense human interest and belong essentially to the creative imagination of poetry. It is with these moments that my poem is chiefly concerned, not with any impossible attempt to cover the whole field or to make a new poetic system, after the Lucretian model, out of modern science.

The theme has been in my mind for a good many years; and the first volume, dealing with the 'Watchers of the Sky,' began to take definite shape during what was to me an unforgettable experience—the night I was privileged to spend on a summit of the Sierra Madre Mountains, when the first trial was made of the new 100-inch telescope. The prologue to this volume attempts to give a picture of that night, and to elucidate my own purpose.

The first tale in this volume plunges into the middle of things, with the revolution brought about by Copernicus; but, within the tale, partly by means of an incidental lyric, there is an attempt to give a bird's-eye view of what had gone before. The torch then passes to Tycho Brahe. who, driven into exile with his tables of the stars, at the very point of death hands them over to a young man named Kepler. Kepler, with their help, arrives at his own great laws, and corresponds with Galileo—the intensely human drama of whose life I have endeavoured to depict with more historical accuracy than can be attributed to much of the poetic literature that has gathered around his name. Too many writers have succumbed to the temptation of the crv. "E pur si muove!" It is, of course, rejected by every reliable historian, and was first attributed to Galileo a hundred years after his death. M. Ponsard, in his play on the subject, succumbed to the extent of making his final scene end with Galileo "frappant du pied la terre," and crying, "pourtant elle tourne." Galileo's recantation was a far more subtle and tragically complicated affair than that. Even Landor succumbed to the easy method of making him display his entirely legendary scars to Milton. If these familiar pictures are not to be found in my poem, it may be well for me to assure the hasty reader that it is because I have endeavoured to present a more just picture. I have tried to suggest the complications of motive in this section by a series of letters passing between the characters chiefly concerned. There was. of course, a certain poetic significance in the legend of "E pur si muove"; and this significance I have endeavoured to retain without violating historical truth.

In the year of Galileo's death Newton was born, and the subsequent sections carry the story on to the modern observatory again. The form I have adopted is a development from that of an earlier book. 'Tales of the Mermaid Tavern.' where certain poets and discoverers of another kind were brought together round a central idea, and their stories told in a combination of narrative and lyrical verse. 'The Torch-Bearers' flowed all the more naturally into a similar form in view of the fact that Tycho Brahe, Kepler, and many other pioneers of science wrote a considerable number of poems. Those imbedded in the works of Kepler-whose blazing and fantastic genius was, indeed, primarily poetic—are of extraordinary interest. I was helped, too, in the general scheme by those constant meetings between science and poetry, of which the most famous and beautiful are the visit of Sir Henry Wotton to Kepler, and the visit of Milton to Galileo in prison.

Even if science and poetry were as deadly opposites as the shallow often affirm, the method and scheme indicated above would at least make it possible to convey something of the splendour of the long battle for the light in its most human aspect. Poetry has its own precision of expression, and, in modern times, it has been seeking more and more for truth, sometimes even at the expense of beauty. May it not be possible to carry that quest a stage farther, to the point where, in the great rhythmical laws of the universe revealed by science, truth and beauty are reunited. If poetry can do this, it will not be

without some value to science itself, and it will be playing its part in the reconstruction of a shattered world.

The passing of the old order of dogmatic religion has left the modern world in a strange chaos, craving for something in which it can unfeignedly believe, and often following will-o'the-wisps. Forty years ago, Matthew Arnold prophesied that it would be for poetry, "where it is worthy of its high destinies," to carry on the purer fire, and to express in new terms those eternal ideas which must ever be the only sure stav of the human race. It is not within the province of science to attempt a post-Copernican justification of the ways of God to man; but, in the laws of nature revealed by science, and in "that grand sequence of events which"—as Darwin affirmed—"the mind refuses to accept as the result of blind chance," poetry may discover its own new grounds for the attempt. It is easy to assume that all hope and faith are shallow. It is even easier to practise a really shallow and devitalising pessimism. The modern annunciation that there is a skeleton an inch beneath the skin of man is neither new nor profound. Neither science nor poetry can rest there; and if, in this poem, an attempt is made to show that spiritual values are not diminished or overwhelmed by the "fifteen hundred universes" that passed in review before the telescope of Herschel, it is only after the opposite argument -so common and so easy to-day - has been faced; and only after poetry has at least en-deavoured to follow the torch of science to its own deep-set boundary-mark in that immense darkness of Space and Time.

CONTENTS.

•								PAGE
	PROLOG	GUE.	•	•	•	•		1
۲.	COPERN	icus		•				21
II.	тусно	BRAHE	•	•	•		•	37
ш.	KEPLEI	R .	•				•	104
IV.	GALILE	о.	•		•			133
v.	NEWTO	N.	•		٠			186
VI.	WILLIA	M HERS	SCHEL	CONI	DUCTS			232
VII.	SIR JO	HN HER	SCHEI	REM	TEMBE!	RS		245
	EPILOG	UE .			_			272



The Torch-Bearers.

PROLOGUE.

THE OBSERVATORY.

- AT noon, upon the mountain's purple height,
- Above the pine-woods and the clouds it shone
- No larger than the small white dome of shell
- Left by the fledgling wren when wings are born.
- By night it joined the company of heaven,
- And, with its constant light, became a star.

VOL. I.

A needle-point of light, minute, remote, It sent a subtler message through the abyss,

Held more significance for the seeing eye
Than all the darkness that would blot it
out,

Yet could not dwarf it.

High in heaven it shone,

Alive with all the thoughts, and hopes, and dreams

Of man's adventurous mind.

Up there, I knew

The explorers of the sky, a quiet throng
Of pioneers, made ready to attack

Of pioneers, made ready to attack

That darkness once again, and win new worlds.

To-morrow night they hoped to crown the toil

Of twenty years, and turn upon the sky

The noblest weapon ever made by man.

War had delayed them. They had been drawn away

Designing darker weapons. But no gun Could outrange this.

"To-morrow night"—so wrote their chief
—"we try

Our great new telescope, the hundred-inch.

Your Milton's 'optic tube' has grown in power

Since Galileo, famous, blind, and old,

Talked with him, in that prison, of the sky.

We creep to power by inches. Europe trusts

Her 'giant forty' still. Even to-night

Our own old sixty has its work to do;

And now our hundred-inch . . . I hardly dare

To think what this new muzzle of ours may find.

Come up, and spend that night among the stars

Here, on our mountain-top. If all goes well,

- Then, at the least, my friend, you'll see a moon
- Stranger, but nearer, many a thousand mile Than earth has ever seen her, even in dreams.
- As for the stars, if seeing them were all,
- Three thousand million new-found points $_{\bullet}$ of light
- Is our rough guess. But never speak of this.
- You know our press. They'd miss the one result
- To flash 'three thousand millions' round the world."
- To-morrow night! For more than twenty years
- They had thought and planned and worked. Ten years had gone,
- One-fourth, or more, of man's brief workinglife,
- Before they made those solid tons of glass, Their hundred-inch reflector, the clear pool,

The polished flawless pool that it must be To hold the perfect image of a star.

And, even now, some secret flaw—none knew

Until to-morrow's test—might waste it all. Where was the gambler that would stake

so much,—

Time, patience, treasure, on a single throw? The cost of it,—they'd not find that again,

Either in gold or life-stuff! All their youth

Was fuel to the flame of this one work.

Once in a lifetime to the man of science,

Despite what fools believe his ice-cooled blood,

There comes this drama.

If he fails, he fails

Utterly. He at least will have no time

For fresh beginnings. Other men, no doubt,

Years hence, will use the footholes that he cut

In those precipitous cliffs, and reach the height,

But he will never see it.

So for me,

The light words of that letter seemed to hide

The passion of a lifetime, and I shared The crowning moment of its hope and fear.

Next day, through whispering aisles of palm we rode

Up to the foot-hills, dreaming desert-hills That to assuage their own delicious drought Had set each tawny sun-kissed slope ablaze With peach and orange orchards.

Up and up,

Along the thin white trail that wound and climbed

And zig-zagged through the grey-green mountain sage,

The car went crawling, till the shining plain

Below it, like an airman's map, unrolled.

- Houses and orchards dwindled to white specks
- In midget cubes and squares of tufted green.
- Once, as we rounded one steep curve, that made
- The head swim at the canyoned gulf below,
- We saw through thirty miles of lucid air Elvishly small, sharp as a crumpled petal
- Blown from the stem, a yard away, a sail
- Lazily drifting on the warm blue sea.
- Up for nine miles along that spiral trail
- Slowly we wound to reach the lucid height
- Above the clouds, where that white dome of shell,
- No wren's now, but an eagle's, took the flush
- Of dying day. The sage-brush all died out,
- And all the southern growths, and round us now,

Firs of the north, and strong, storm-rooted pines

Exhaled a keener fragrance; till, at last, Reversing all the laws of lesser hills, They towered like giants round us. Dark-

They towered like giants round us. Darkness fell

Before we reached the mountain's naked, height.

Over us, like some great cathedral dome,
The observatory loomed against the sky;
And the dark mountain with its headlong
gulfs

Had lost all memory of the world below;
For all those cloudless throngs of glittering stars,

And all those glimmerings where the abyss of space

Is powdered with a milky dust, each grain A burning sun, and every sun the lord Of its own darkling planets,—all those lights

Met, in a darker deep, the lights of earth,

Lights on the sea, lights of invisible towns, Trembling and indistinguishable from stars, In those black gulfs around the mountain's feet.

Then, into the glimmering dome, with bated breath,

We entered, and, above us, in the gloom Saw that majestic weapon of the light Uptowering like the shaft of some huge gun Through one arched rift of sky.

Dark at its base

With naked arms, the crew that all day long

Had sweated to make ready for this night Waited their captain's word.

The switchboard shone With elfin lamps of white and red, and keys Whence, at a finger's touch, that monstrous tube

Moved like a creature dowered with life and will,

To peer from deep to deep.

Below it pulsed

The clock-machine that slowly, throb by throb,

Timed to the pace of the revolving earth, Drove the titanic muzzle on and on,

Fixed to the chosen star that else would glide

Out of its field of vision.

So, set free

Balanced against the wheel of time, it swung,

Or rested, while, to find new realms of sky

The dome that housed it, like a moon revolved,

So smoothly that the watchers hardly knew

They moved within; till, through the glimmering doors,

They saw the dark procession of the pines Like Indian warriors, quietly stealing by.

Then, at a word, the mighty weapon dipped

Its muzzle and aimed at one small point of light,

One seeming insignificant star.

The chief,

Mounting the ladder, while we held our breath,

Looked through the eye-piece.

Then we heard him laugh

His thanks to God, and hide it in a jest.

"A prominence on Jupiter!"—

They laughed,

"What do you mean?"—"It's moving," cried the chief,

They laughed again, and watched his glimmering face

High overhead against that moving tower.

"Come up and see, then!"

One by one they went,

And, though each laughed as he returned to earth.

Their souls were in their eyes.

Then I, too, looked,

And saw that insignificant spark of light

Touched with new meaning, beautifully reborn,

A swimming world, a perfect rounded pearl,
Poised in the violet sky; and, as I gazed,
I saw a miracle,—right on its upmost
edge

A tiny mound of white that slowly rose, . Then, like an exquisite seed-pearl, swung quite clear

And swam in heaven above its parent world

To greet its three bright sister-moons.

A moon,

Of Jupiter, no more, but clearer far

Than mortal eyes had seen before from
earth.

Beautiful, keen and clear beyond all dreams Was that one silver phrase of the starry tune

Which Galileo's "old discoverer" first Dimly revealed, dissolving into clouds The imagined fabric of our universe.

"Jupiter stands in heaven and will stand

- Though all the sycophants bark at him," he cried,
- Hailing the truth before he, too, went down,
- Whelmed in the cloudy wreckage of that dream.
- So one by one we looked, the men who served
- Urania, and the men from Vulcan's forge.
- A beautiful eagerness in the darkness lit
- The swarthy faces that too long had missed
- A meaning in the dull mechanic maze
- Of labour on this blind earth, but found it now.
- Though only a moment's wandering melody
- Hopelessly far above, it gave their toil
- Its only consecration and its joy.
- There, with dark-smouldering eyes and naked throats,
- Blue-dungareed, red-shirted, grimed and smeared

- With engine-grease and sweat, they gathered round
- The foot of that dim ladder; each muttering low
- As he came down, his wonder at what he saw
- To those who waited,—a picture for the brush
- Of Rembrandt, lighted only by the rift
- Above them, where the giant muzzle thrust
- Out through the dim arched roof, and slowly throbbed,
- Against the slowly moving wheel of the earth,
- Holding their chosen star.

There, like an elf,

- Perched on the side of that dark slanting tower,
- The Italian mechanician watched the moons
- That Italy discovered.

One by one,

English, American, French, and Dutch, they climbed

To see the wonder that their own blind hands

Had helped to achieve.

At midnight while they paused

To adjust the clock-machine, I wandered out

Alone, into the silence of the night.

The silence? On that lonely height I heard

Eternal voices;

For, as I looked into the gulf beneath,

Whence almost all the lights had vanished now,

The whole dark mountain seemed to have lost its earth

And to be sailing like a ship through heaven.

All round it surged the mighty sea-like sound

Of soughing pine-woods, one vast ebb and flow

Of absolute peace, aloof from all earth's pain,

So calm, so quiet, it seemed the cradlesong,

The deep soft breathing of the universe Over its youngest child, the soul of man.

And, as I listened, that Æolian voice

Became an invocation and a prayer:

O you, that on your loftier mountain dwell

And move like light in light among the thoughts

Of heaven, translating our mortality
Into immortal song, is there not one
Among you that can turn to music now
This long dark fight for truth? Not one

to touch

With beauty this long battle for the light,
This little victory of the spirit of man
Doomed to defeat—for what was all we
saw

To that which neither eyes nor soul could see?—

Doomed to defeat and yet unconquerable, Climbing its nine miles nearer to the stars.

Wars we have sung. The blind, blood-boltered kings

Move with an epic music to their thrones.

Have you no song, then, of that nobler war?

Of those who strove for light, but could not dream

Even of this victory that they helped to win,

Silent discoverers, lonely pioneers,

Prisoners and exiles, martyrs of the truth

Who handed on the fire, from age to age;

Of those who, step by step, drove back the night

And struggled, year on year, for one more glimpse

Among the stars, of sovran law, their guide;

Of those who searching inward, saw the rocks

Dissolving into a new abyss, and saw VOL. I. B

Those planetary systems far within,
Atoms, electrons, whirling on their way
To build and to unbuild our solid world;
Of those who conquered, inch by difficult inch,

The freedom of this realm of law for man; Dreamers of dreams, the builders of our hope,

The healers and the binders up of wounds, Who, while the dynasts drenched the world with blood,

Would in the still small circle of a lamp Wrestle with death like Heracles of old To save one stricken child.

Is there no song

To touch this moving universe of law With ultimate light, the glimmer of that great dawn

Which over our ruined altars yet shall break

In purer splendour, and restore mankind From darker dreams than even Lucretius knew, To vision of that one Power which guides the world.

How should men find it? Only through those doors

Which, opening inward, in each separate soul Give each man access to that Soul of all Living within each life, not to be found Or known, till, looking inward, each alone Meets the unknowable and eternal God.

And there was one that moved like light in light

Before me there,—Love, human and divine, That can exalt all weakness into power,—

Whispering, Take this deathless torch of song . . .

Whispering, but with such faith, that even I

Was humbled into thinking this might be Through love, though all the wisdom of the world

Account it folly.

Let my breast be bared

To every shaft, then, so that Love be still My one celestial guide the while I sing Of those who caught the pure Promethean fire

One from another, each crying as he went down

To one that waited, crowned with youth and joy,—

Take thou the splendour, carry it out of sight Into the great new age I must not know, Into the great new realm I must not tread.

1.

COPERNICUS.

THE neighbours gossiped idly at the door. Copernicus lay dying overhead.

His little throng of friends, with startled eyes,

Whispered together, in that dark house of dreams,

From which by one dim crevice in the wall He used to watch the stars.

"His book has come

From Nuremberg at last; but who would dare

To let him see it now?"-

"They have altered it!

Though Rome approved in full, this preface, look,

- Declares that his discoveries are a dream!"—
- "He has asked a thousand times if it has come;
- Could we tear out those pages?"—
 "He'd suspect."—
- "What shall be done, then?"—
 - "Hold it back awhile.
- That was the priest's voice in the room above.
- He may forget it. Those last sacraments

 May set his mind at rest, and bring him

 peace."—
- Then, stealing quietly to that upper door,
- They opened it a little, and saw within
- The lean white deathbed of Copernicus
- Who made our world a world without an end.
- There, in that narrow room, they saw his face
- Grey, seamed with thought, lit by a single lamp;
- They saw those glorious eyes

Closing, that once had looked beyond the spheres

And seen our ancient firmaments dissolve Into a boundless night.

Beside him knelt

Two women, like bowed shadows. At his feet,

An old physician watched him. At his head,

The cowled Franciscan murmured, while the light

Shone faintly on the chalice.

All grew still.

The fragrance of the wine was like faint flowers,

The first breath of those far celestial fields. . . .

Then, like a dying soldier, that must leave His last command to others, while the fight

Is yet uncertain, and the victory far, Copernicus whispered, in a fevered dream, "Yes, it is Death. But you must hold him back,

There, in the doorway, for a little while, Until I know the work is rightly done.

Use all your weapons, doctor. I must live To see and touch one copy of my book.

Have they not brought it yet?

They promised me

It should be here by nightfall.

One of you go

And hasten it. I can hold back Death till dawn.

Have they not brought it yet?—from Nuremberg.

Do not deceive me. I must know it safe, Printed and safe, for other men to use.

I could die then. My use would be fulfilled.

What has delayed them? Will not some one go

And tell them that my strength is running out?

Tell them that book would be an angel's hand

In mine, an easier pillow for my head,
A little lantern in the engulfing dark.
You see, I hid its struggling light so long
Under too small a bushel, and I fear
It may go out for ever. In the noon
Of life's brief day, I could not see the need
As now I see it, when the night shuts down.
I was afraid, perhaps, it might confuse
The lights that guide us for the souls of
men.

But now I see three stages in our life.

At first, we bask contented in our sun

And take what daylight shows us for the

truth.

Then we discover, in some midnight grief, How all day long the sunlight blinded us To depths beyond, where all our knowledge dies.

That's where men shrink, and lose their way in doubt.

Then, last, as death draws nearer, comes a night

In whose majestic shadow men see God,

Absolute Knowledge, reconciling all.

So, all my life I pondered on that scheme

Which makes this earth the centre of all worlds,

Lighted and wheeled around by sun and moon

And that great crystal sphere wherein men thought

Myriads of lesser stars were fixed like lamps,

Each in its place,—one mighty glittering wheel

Revolving round this dark abode of man.

Night after night, with even pace they moved,

Year after year, not altering by one point, Their order, or their stations, those fixed stars

In that revolving firmament. The Plough

Still pointed to the Pole. Fixed in their sphere,

How else explain that vast unchanging wheel?

How, but by thinking all those lesser lights

Were huger suns, divided from our earth

By so immense a gulf that, if they moved

Ten thousand leagues an hour among themselves,

It would not seem one hair's-breadth to our eyes.

Utterly inconceivable, I know;

And yet we daily kneel to boundless Power

And build our hope on that Infinitude.

This did not daunt me, then. Indeed, I saw

Light upon chaos. Many discordant dreams Began to move in lucid music now.

For what could be more baffling than the thought

That those enormous heavens must circle earth

Diurnally—a journey that would need Swiftness to which the lightning-flash would seem

A white slug creeping on the walls of night; While, if earth softly on her axle spun One quiet revolution answered all.

It was our moving selves that made the sky

Seem to revolve. Have not all ages seen
A like illusion baffling half mankind

In life, thought, art? Men think, at every turn

Of their own souls, the very heavens have moved.

Light upon chaos, light, and yet more light;

For—as I watched the planets—Venus, Mars,

Appeared to wax and wane from month to month

- As though they moved, now near, now far, from earth.
- Earth could not be their centre. Was the sun
- Their sovran lord then, as Pythagoras held?
- Was this great earth, so stablished, so secure,
- A planet also? Did it also move
- Around the sun? If this were true, my friends,
- No revolution in this world's affairs,
- Not that blind maelstrom where imperial Rome
- Went down into the dark, could so engulf
- All that we thought we knew. We who believed
- In our own majesty, we who walked with gods
- As younger sons on this proud central stage,
- Round which the whole bright firmament revolved

For our especial glory, must we creep Like ants upon our midget ball of dust Lost in immensity?

I could not take

That darkness lightly. I withheld my book For many a year, until I clearly saw,

And Rome approved me—have they not brought it yet?—

That this tremendous music could not drown

The still supernal music of the soul,

Or quench the light that shone when Christ was born.

For who, if one lost star could lead the kings

To God's own Son, would shrink from following these

To His eternal throne?

This at the least

We know, the soul of man can soar through heaven.

It is our own wild wings that dwarf the world

To nothingness beneath us. Let the soul Take courage, then. If its own thought be true,

Not all the immensities of little minds Can ever quench its own celestial fire.

No. This new night was needed, that the soul

Might conquer its own kingdom and arise To its full stature. So, in face of death, I saw that I must speak the truth I knew.

Have they not brought it? What delays my book?

I am afraid. Tell me the truth, my friends. At this last hour, the Church may yet

 $\mathbf{withhold}$

Her sanction. Not the Church, but those who think

A little darkness helps her.

Were this true,

They would do well. If the poor light we win

Confuse or blind us, to the Light of lights,

Let all our wisdom perish. I affirm

A greater Darkness, where the one true Church

Shall after all her agonies of loss

And many an age of doubt, perhaps, to come,

See this processional host of splendours burn

Like tapers round her altar.

So I speak

Not for myself, but for the age unborn.

I caught the fire from those who went before,

The bearers of the torch who could not see

The goal to which they strained. I caught their fire,

And carried it, only a little way beyond;

But there are those that wait for it, I know.

Those who will carry it on to victory.

I dare not fail them. Looking back, I see

- Those others,—fallen, with their arms outstretched
- Dead, pointing to the future.

Far, far back,

- Before the Egyptians built their pyramids
- With those dark funnels pointing to the north,
- Through which the Pharaohs from their desert tombs
- Gaze all night long upon the Polar Star,
- Some wandering Arab crept from death to life
- Led by the Plough across those wastes of pearl. . . .
- Long, long ago—have they not brought it yet?
- My book?—I finished it one summer's night,
- And felt my blood all beating into song.
- I meant to print those verses in my book,
- A prelude, hinting at that deeper night vol. 1.

Which darkens all our knowledge. Then I thought

The measure moved too lightly.

Do you recall

Those verses, Elsa? They would pass the time.

How happy I was the night I wrote that song!"

Then, one of those bowed shadows raised her head

And, like a mother crooning to her child, Murmured the words he wrote, so long ago.

In old Cathay, in far Cathay,

Before the western world began,

They saw the moving fount of day

Eclipsed, as by a shadowy fan;

They stood upon their Chinese wall,

They saw his fire to ashes fade,

And felt the deeper slumber fall

On domes of pearl and towers of jade.

With slim brown hands, in Araby,
They traced, upon the desert sand,
Their Rams and Scorpions of the sky,
And strove—and failed—to understand.
Before their footprints were effaced
The shifting sand forgot their rune;
Their hieroglyphs were all erased,
Their desert naked to the moon.

In Bagdad of the purple nights,
Haroun Al Raschid built a tower,
Where sages watched a thousand lights
And read their legends, for an hour.
The tower is down, the Caliph dead,
Their astrolabes are wrecked with rust.
Orion glitters overhead,
Aladdin's lamp is in the dust:

In Babylon, in Babylon,

They baked their tablets of the clay;

And, year by year, inscribed thereon

The dark eclipses of their day;

They saw the moving finger write Its Mene, Mene, on their sun.

A mightier shadow cloaks their light, And clay is clay in Babylon.

A shadow moved towards him from the door.

Copernicus, with a cry, upraised his head. "The book, I cannot see it, let me feel The lettering on the cover.

It is here!

Put out the lamp, now. Draw those curtains back,

And let me die with starlight on my face.

An angel's hand in mine . . . yes; I can say

My nunc dimittis now . . . light, and more light

In that pure realm whose darkness is our peace."

11.

TYCHO BRAHE.

T.

- They thought him a magician, Tycho Brahe,
- Who lived on that strange island in the Sound,
- Nine miles from Elsinore.

His legend reached

- The Mermaid Inn the year that Shake-speare died.
- Fynes Moryson had brought his travellers' tales
- Of Wheen, the heart-shaped isle where Tycho made
- His great discoveries, and, with Jeppe, his dwarf,

- And flaxen-haired Christine, the peasant girl,
- Dreamed his great dreams for five-andtwenty years.
- For there he lit that lanthorn of the law, Uraniborg: that fortress of the truth,
- With Pegasus flying above its loftiest tower,
- While, in its roofs, like wide enchanted eyes
- Watching, the brightest windows in the world,
- Opened upon the stars.
- Nine miles from Elsinore, with all those ghosts,
- There's magic enough in that! But whitecliffed Wheen,
- Six miles in girth, with crowds of hunchback waves
- Crawling all round it, and those moonstruck windows,
- Held its own magic, too; for Tycho Brahe

- By his mysterious alchemy of dreams
- Had so enriched its soil, that when the king
- Of England wished to buy it, Denmark asked
- A price too great for any king on earth.
- "Give us," they said, "in scarlet cardinal's cloth
- Enough to cover it, and, at every corner,
- Of every piece, a right rose-noble too;
- Then all that kings can buy of Wheen is yours.
- Only," said they, "a merchant bought it once;
- And, when he came to claim it, goblins flocked
- All round him, from its forty goblin farms,
- And mocked him, bidding him take away the stones
- That he had bought, for nothing else was his."
- These things were fables. They were also true.

They thought him a magician, Tycho Brahe,

The astrologer, who wore the mask of gold.

Perhaps he was. There's magic in the truth;

And only those who find and follow its laws

Can work its miracles.

Tycho sought the truth

From that strange year in boyhood when he heard

The great eclipse foretold; and, on the day

Appointed, at the very minute even, Beheld the weirdly punctual shadow creep Across the sun, bewildering all the birds With thoughts of evening.

Picture him, on that day,
The boy at Copenhagen, with his mane
Of thick red hair, thrusting his freckled
face

Out of his upper window, holding the piece

Of glass he blackened above his candle-flame

To watch that orange ember in the sky Wane into smouldering ash.

He whispered there,

"So it is true. By searching in the heavens,

Men can foretell the future."

In the street

Below him, throngs were babbling of the plague

That might or might not follow.

He resolved

To make himself the master of that deep art,

And know what might be known.

He bought the books

Of Stadius with his tables of the stars.

Night after night, among the gabled roofs, Climbing and creeping through a world unknown

Save to the roosting stork, he learned to find

The constellations, Cassiopeia's throne,

The Plough still pointing to the Polar Star,

The sword-belt of Orion. There he watched The movements of the planets, hours on hours,

And wondered at the mystery of it all.

All this he did in secret, for his birth Was noble, and such wonderings were a

sign

Of low estate, when Tycho Brahe was young;

And all his kinsmen hoped that Tycho Brahe

Would live, serene as they, among his dogs .

And horses; or, if honour must be won,

Let the superfluous glory flow from fields

Where blood might still be shed; or from those courts

Where statesmen lie. But Tycho sought the truth.

So, when they sent him in his tutor's charge

To Leipzig, for such studies as they held More worthy of his princely blood, he searched

The Almagest; and while his tutor slept,
Measured the delicate angles of the stars,
Out of his window, with his compasses,
His only instrument. Even with this rude
aid

He found so many an ancient record wrong

That more and more he burned to find the truth.

One night at home, as Tycho searched the sky,

Out of his window, compasses in hand,
Fixing one point upon a planet, one
Upon some loftier star, a ripple of laughter
Startled him, from the garden walk below.
He lowered his compass, peered into the
dark

And saw—Christine, the blue-eyed peasant girl,

With bare brown feet, standing among the flowers.

She held what seemed an apple in her hand;

And, in a voice that Aprilled all his blood, The low soft voice of earth, drawing him down

From those cold heights to that warm breast of Spring,

A natural voice that had not learned to use The false tones of the world, simple and clear

As a bird's voice, out of the fragrant darkness called,

"I saw it falling from your window-ledge! I thought it was an apple, till it rolled Over my foot.

It's heavy. Shall I try
To throw it back to you?"

Tycho saw a stain

Of purple across one small arched glistening foot.

"Your foot is bruised," he cried.

"O no," she laughed,

And plucked the stain off. "Only a petal, see."

She showed it to him.

"But this—I wonder now

If I can throw it."

Twice she tried and failed;

Or Tycho failed to catch that slippery sphere.

He saw the supple body swaying below,

The ripe red lips that parted as she laughed,

And those deep eyes where all the stars were drowned.

At the third time he caught it; and she vanished,

Waving her hand, a little floating moth, Between the pine-trees, into the warm

dark night.

He turned into his room, and quickly thrust

Under his pillow that forbidden fruit; For the door opened, and the hot red face Of Otto Brahe, his father, glowered at him. "What's this? What's this?"

The furious-eyed old man Limped to the bedside, pulled the mystery out,

And stared upon the strangest apple of Eve

That ever troubled Eden,—heavy as bronze, And delicately enchased with silver stars, The small celestial globe that Tycho bought In Leipzig.

Then the storm burst on his head!

This moon - struck 'pothecary's - prentice work,

These cheap-jack calendar-maker's gipsy tricks

Would damn the mother of any Knutsdorp squire,

And crown his father like a stag of ten.

- Quarrel on quarrel followed from that night,
- Till Tycho sickened of his ancient name;
- And, wandering through the woods about his home,
- Found on a hill-top, ringed with fragrant pines,
- A little open glade of whispering ferns.
- Thither, at night, he stole to watch the stars;
- And there he told the oldest tale on earth
- To one that watched beside him, one whose eyes
- Shone with true love, more beautiful than the stars,
- A daughter of earth, the peasant-girl, Christine.
- They met there, in the dusk, on his last night
- At home, before he went to Wittenberg.

They stood knee-deep among the whispering ferns,

And said good-bye.

"I shall return," he said,

"And shame them for their folly, who would set

Their pride above the stars, Christine, and you.

At Wittenberg or Rostoch I shall find

More chances and more knowledge. All those worlds

Are still to conquer. We know nothing yet;

The books are crammed with fables. They foretell

Here an eclipse, and there a dawning moon, But most of them were out a month or

more

On Jupiter and Saturn.

There's one way,

And only one, to knowledge of the law Whereby the stars are steered, and so to read The future, even perhaps the destinies

Of men and nations, — only one sure way,

And that's to watch them, watch them, and record

The truth we know, and not the lies we dream.

Dear, while I watch them, though the hills and sea

Divide us, every night our eyes can meet

Among those constant glories. Every night

Your eyes and mine, upraised to that bright realm,

Can, in one moment, speak across the world.

I shall come back with knowledge and with power,

And you—will wait for me?"

She answered him

In silence, with the starlight of her eyes.

П.

- He watched the skies at Wittenberg. The plague
- Drove him to Rostoch, and he watched them there;
- But, even there, the plague of little minds Beset him. At a wedding-feast he met
- His noble countryman, Manderup, who asked.
- With mocking courtesy, whether Tycho Brahe
- Was ready yet to practise his black art
- At country fairs. The guests, and Tycho, laughed;
- Whereat the swaggering Junker blandly sneered,
- "If fortune telling fail, Christine will dance,
- Thus—tambourine on hip," he struck a pose.
- "Her pretty feet will pack that booth of yours."

- They fought, at midnight, in a wood, with swords.
- And not a spark of light but those that leapt
- Blue from the clashing blades. Tycho had lost
- His moon and stars awhile, almost his life;
- For, in one furious bout, his enemy's blade
- Dashed like a scribble of lightning into the face
- Of Tycho Brahe, and left him spluttering blood,
- Groping through that dark wood with outstretched hands,
- To fall in a death-black swoon.

They carried him back

To Rostoch; and when Tycho saw at last That mirrored patch of mutilated flesh,

- Seared as by fire, between the frank blue eyes
- And firm young mouth where, like a living flower

Upon some stricken tree, youth lingered still,

He'd but one thought, Christine would shrink from him

In fear, or worse, in pity. An end had come

Worse than old age, to all the glory of youth.

Urania would not let her lover stray Into a mortal's arms. He must remain Her own, for ever; and for ever, alone.

Yet, as the days went by, to face the world,

He made himself a delicate mask of gold And silver, shaped like those that minstrels wear

At carnival in Venice, or when love,
Disguising its disguise of mortal flesh,
Wooes as a nameless prince from far away.
And when this world's day, with its blaze
and coil

Was ended, and the first white star awoke

In that pure realm where dreams may find their own,

His eyes and hers, meeting on Hesperus, Renewed their troth.

He seemed to see Christine, Ringed by the pine-trees on that distant hill,

A small white figure, lost in space and time,

Yet gazing at the sky, and conquering all, Height, depth, and heaven itself, by the sheer power

Of love at one with everlasting laws, A love that shared the constancy of heaven, And spoke to him across, above, the world.

III.

Not till he crossed the Danube did he find Among the fountains and the storied eaves Of Augsburg, one to share his task with him.

Paul Hainzel, of that city, greatly loved,

To talk with Tycho of the strange new dreams

Copernicus had kindled. Did this earth Move? Was the sun the centre of our scheme?

And Tycho told him, there is but one way To know the truth, and that's to sweep aside

All the dark cobwebs of old sophistry,
And watch and learn that moving alphabet,
Each smallest silver character inscribed
Upon the skies themselves, noting them
down,

Till on a day we find them taking shape In phrases, with a meaning; and, at last, The hard-won beauty of that celestial book With all its epic harmonies unfold Like some great poet's universal song.

He was a great magician, Tycho Brahe. "Hainzel," he said, "we have no magic wand,

But what the truth can give us. If we find

Even with a compass, through a bedroom window,

That half the glittering Almagest is wrong, Think you, what noble conquests might be ours,

Had we but nobler instruments."

He showed

Quivering with eagerness, his first rude plan

For that great quadrant,—not the wooden toy

Of old Scultetus, but a kingly weapon,

Huge as a Roman battering-ram, and fine In its divisions as any goldsmith's work.

"It could be built," said Tycho, "but the

Would buy a dozen culverin for your wars."

Then Hainzel, fired by Tycho's burning brain,

Answered, "We'll make it. We've a war to wage

On Chaos, and his kingdoms of the night."

- They chose the cunningest artists of the town,
- Clock-makers, jewellers, carpenters, and smiths,
- And, setting them all afire with Tycho's dream,
- Within a month his dream was oak and brass.
- Its beams were fourteen cubits, solid oak, Banded with iron. Its arch was polished brass
- Whereon five thousand exquisite divisions
 Were marked to show the minutes of
 degrees.

So huge and heavy it was, a score of men Could hardly drag and fix it to its place In Hainzel's garden.

Many a shining night,

- Tycho and Hainzel, out of that maze of flowers,
- Charted the stars, discovering point by point,

How all the records erred, until the fame

Of this new master, hovering above the schools

Like a strange hawk, threatened the creeping dreams

Of all the Aristotelians, and began

To set their mouse-holes twittering "Tycho Brahe!"

Then Tycho Brahe came home, to find Christine.

Up to that whispering glade of ferns he sped,

At the first wink of Hesperus.

He stood

In shadow, under the darkest pine, to hide

The little golden mask upon his face.

He wondered, will she shrink from me in fear

Or loathing? Will she even come at all?

And, as he wondered, like a light she moved

Before him.

"Is it you?"—

"Christine! Christine,"

He whispered, "It is I, the mountebank, Playing a jest upon you. It's only a mask! Do not be frightened. I am here behind it."

Her red lips parted, and between them shone

The little teeth like white pomegranate seeds.

He saw her frightened eyes.

Then, with a cry,

Her arms went round him, and her eyelids closed.

Lying against his heart, she set her lips
Against his lips, and claimed him for her
own.

IV.

One frosty night, as Tycho bent his way Home to the dark old abbey, he upraised His eyes, and saw a portent in the sky. There, in its most familiar patch of blue, Where Cassiopeia's five-fold glory burned, An unknown brilliance quivered, a huge star

Unseen before, a strange new visitant To heavens unchangeable, as the world believed,

Since the creation.

Could new stars be born?

Night after night he watched that miracle
Growing and changing colour as it grew;

White at the first, and large as Jupiter;

And, in the third month, yellow, and larger

yet;

Red in the fifth month, like Aldebaran,
And larger even than Lyra. In the seventh,
Bluish like Saturn; whence it dulled and
dwined

Little by little, till after eight months more
Into the dark abysmal blue of night,
Whence it arose, the wonder died away.
But, while it blazed above him, Tycho
brought

Those delicate records of two hundred nights

To Copenhagen. There, in his golden mask,

At supper with Pratensis, who believed

Only what old books told him, Tycho met

Dancey, the French Ambassador, rainbowgay

In satin hose and doublet, supple and thin,

Brown-eyed, and bearded with a soft black tuft

Neat as a blackbird's wing,—a spirit as keen

And swift as France on all the starry trails Of thought.

He saw the deep and simple fire, The mystery of all genius, in those eyes Above the golden vizard.

Tycho raised

His wine-cup, brimming—they thought—with purple dreams;

And bade them drink to their triumphant Queen

Of all the Muses, to their Lady of Light

Urania, and the great new star.

They laughed,

Thinking the young astrologer's golden mask

Hid a sardonic jest.

"The skies are clear,"

Said Tycho Brahe, "and we have eyes to see.

Put out your candles. Open those windows there!"

The colder darkness breathed upon their brows,

And Tycho pointed, into the deep blue night.

There, in their most immutable height of heaven,

In ipso cælo, in the ethereal realm,

Beyond all planets, red as Mars it burned, The one impossible glory.

"But it's true!"

Pratensis gasped; then, clutching the first straw,

"Now I recall how Pliny the Elder said,

Hipparchus also saw a strange new star,

Not where the comets, not where the Rosæ bloom

And fade, but in that solid crystal sphere Where nothing changes."

Tycho smiled, and showed The record of his watchings.

"But the world

Must know all this," cried Dancey. "You must print it."

"Print it?" said Tycho, turning that golden mask

On both his friends. "Could I, a noble, print,

This trafficking with Urania in a book?

They'd hound me out of Denmark! This disgrace

Of work, with hands or brain, no matter why,

No matter how, in one who ought to dwell

Fixed to the solid upper sphere, my friends, Would never be forgiven."

Dancey stared

In mute amazement, but that mask of gold Outstared him, sphinx-like, and inscrutable.

Soon through all Europe, like the blinded moths,

Roused by a lantern in old palaces

Among the mouldering tapestries of thought,

Weird fables woke and fluttered to and fro,

And wild-eyed sages hunted them for truth.

The Italian, Frangipani, thought the star

The lost Electra, that had left her throne

Among the Pleiads, and plunged into the night

Like a veiled mourner, when Troy town was burned.

The German painter, Busch, of Erfurt, wrote,

"It was a comet, made of mortal sins;

A poisonous mist, touched by the wrath of God

To fire; from which there would descend on earth

All manner of evil—plagues and sudden death,

Frenchmen and famine."

Preachers thumped and raved.

Theodore Beza in Calvin's pulpit tore

His grim black gown, and vowed it was the Star

That led the Magi. It had now returned

To mark the world's end and the Judgment Day.

Then, in this hubbub, Dancey told the king.

Of Denmark, "There is one who knows the truth—

Your subject Tycho Brahe, who, night by night,

Watched and recorded all that truth could see.

It would bring honour to all Denmark, sire,

If Tycho could forget his rank awhile,

And print these great discoveries in a book,

For all the world to read."

So Tycho Brahe

Received a letter in the king's own hand, Urging him, "Truth is the one pure fountain-head

Of all nobility. Pray forget your rank."
His noble kinsmen echoed, "If you wish

To please His Majesty and ourselves, forget Your rank."

"I will," said Tycho Brahe;

"Your reasoning has convinced me. I will
print

My book, 'De Nova Stella.' And to prove All you have said concerning temporal rank

And this eternal truth you love so well,

I marry, to-day,"—they foamed, but all their mouths

VOL. I.

Were stopped and stuffed and sealed with their own words,—

"I marry to-day my own true love, Christine."

v.

They thought him a magician, Tycho Brahe.

Perhaps he was. There's magic all around us

In rocks and trees, and in the minds of men,

Deep hidden springs of magic.

He that strikes

The rock aright, may find them where he will.

And Tycho tasted happiness in his hour.

There was a prince in Denmark in those days;

And, when he heard how other kings desired

The secrets of this new astrology,

He said, "This man, in after years, will bring

Glory to Denmark, honour to her prince.

He is a Dane. Give him this isle of Wheen,

And let him make his great discoveries there.

Let him have gold to buy his instruments, And build his house and his observatory.

So Tycho set this island where he lived Whispering with wizardry; and, in its heart,

He lighted that strange lanthorn of the law, And built himself that wonder of the world, Uraniborg, a fortress for the truth, A city of the heavens.

Around it ran

A mighty rampart twenty-two feet high,
And twenty feet in thickness at the base.
Its angles pointed north, south, east and
west,

With gates and turrets; and, within this wall,

- Were fruitful orchards, apple, and cherry, and pear;
- And, sheltered in their midst from all but sun,
- A garden, warm and busy with singing bees.
- There, many an hour, his flaxen-haired Christine
- Sang to her child, her first-born, Magdalen,
- Or watched her playing, a flower among the flowers.
- Dark in the centre of that zone of bliss
- Arose the magic towers of Tycho Brahe.
- Two of them had great windows in their roofs
- Opening upon the sky where'er he willed,
- And under these observatories he made
- A library of many a golden book;
- Poets and sages of old Greece and Rome,
- And many a mellow legend, many a dream
- Of dawning truth in Egypt, or the dusk
- Of Araby. Under all of these he made

A subterranean crypt for alchemy,

With sixteen furnaces; and, under this,

He sank a well, so deep, that Jeppe declared

He had tapped the central fountains of the world,

And drew his magic from those cold clear springs.

This was the very well, said Jeppe, the dwarf,

Where Truth was hidden; but, by Tycho Brahe

And his weird skill, the magic water flowed,

Through pipes, uphill, to all the house above:

The kitchen where his cooks could broil a trout

For sages or prepare a feast for kings;

The garrets for the students in the roof;

The guest-rooms, and the red room to the north,

The study and the blue room to the south; The small octagonal yellow room that held The sunlight like a jewel all day long,

And Magdalen, with her happy dreams, at night;

Then, facing to the west, one long green room,

The ceiling painted like the bower of Eve With flowers and leaves, the windows opening wide

Through which Christine and Tycho Brahe at dawn

Could see the white sails drifting on the Sound

Like petals from their orchard.

To the north.

He built a printing house for noble books, Poems, and those deep legends of the sky,

Still to be born at his Uraniborg.

Beyond the rampart to the north arose

A workshop for his instruments. To the south

A low thatched farm-house rambled round a yard

Alive with clucking hens; and, further yet To southward on another hill, he made A great house for his larger instruments, And called it Stiernberg, mountain of the stars.

And, on his towers and turrets, Tycho set Statues with golden verses in the praise Of famous men, the bearers of the torch, From Ptolemy to the new Copernicus. Then, in that storm-proof mountain of the stars,

He set in all their splendour of new-made brass

His armouries for the assault of heaven,—Circles in azimuth, armillary spheres,
Revolving zodiacs with great brazen rings;
Quadrants of solid brass, ten cubits broad,
Brass parallactic rules, made to revolve
In azimuth; clocks with wheels; an astrolabe:

And that large globe strengthened by oaken beams

He made at Augsburg.

All his gold he spent;

But Denmark had a prince in those great days;

And, in his brain, the dreams of Tycho Brahe

Kindled a thirst for glory. So he made Tycho the Lord of sundry lands and rents, And Keeper of the Chapel where the kings Of Oldenburg were buried; for he said "To whom could all these kings entrust their bones

More fitly than to him who read the stars, And though a mortal, knew immortal laws;

And paced, at night, the silent halls of heaven.

VI.

He was a great magician, Tycho Brahe. There, on his island, for a score of years, He watched the skies, recording star on star,

For future ages, and, by patient toil, Perfected his great tables of the sun, The moon, the planets.

There, too happy far
For any history, sons and daughters rose,
A little clan of love, around Christine;
And Tycho thought, when I am dead, my
sons

Will rule and work in my Uraniborg.

And yet a doubt would trouble him, for he knew

The children of Christine would still be held

Ignoble, by the world.

Disciples came,

Young-eyed and swift, the bearers of the torch

From many a city to Uraniborg,
And Tycho Brahe received them like a king,
And bade them light their torches at his
fire.

The King of Scotland came, with all his court,

And dwelt eight days in Tycho Brahe's domain,

Asking him many a riddle, deep and dark, Whose answer, none the less, a king should know.

What boots it on this earth to be a king,
To rule a part of earth, and not to know
The worth of his own realm, whether he
rule

As God's vice-gerent, and his realm be still

The centre of the centre of all worlds;
Or whether, as Copernicus proclaimed,
This earth itself be moving, a lost grain
Of dust among the innumerable stars?
For this would dwarf all glory but the soul,

In king or peasant, that can hail the truth, Though truth should slay it."

So to Tycho Brahe, The king became a subject for eight days.

- But, in the crowded hall, when he had gone,
- Jeppe raised his matted head, with a chuckle of glee,
- Quiet as the gurgle of joy in a dark rockpool,
- When the first ripple and wash of the first spring-tide
- Flows bubbling under the dry sun-blackened fringe
- Of seaweed, setting it all afloat again,
- In magical colours, like a merman's hair.
- "Jeppe has a thought," the gay young students cried.
- Thronging him round, for all believed that Jeppe
- Was fey, and had strange visions of the truth.
- "What is the thought, Jeppe?"
 - "I can think no thoughts,"
- Croaked Jeppe. "But I have made myself a song."

"Silence," they cried, "for Jeppe the nightingale!

Sing, Jeppe!"

And, wagging his great head to and fro Before the fire, with deep dark eyes, he crooned:

THE SONG OF JEPPE.

"What!" said the king,

"Is earth a bird or bee?

Can this uncharted boundless realm of ours

Drone thro' the sky, with leagues of struggling sea,

Forests, and hills, and towns, and palacetowers?"

"Ay," said the dwarf,

"I have watched from Stiernborg's crown

Her far dark rim uplift against the sky; But, while earth soars, men say the stars go down;

And, while earth sails, men say the stars go by."

An elvish tale!

Ask Jeppe, the dwarf! He knows.

That's why his eyes look fey; for, chuckling deep,

Heels over head amongst the stars he goes,

As all men go; but most are sound asleep.

King, saint, and sage,

Even those that count it true,

Act as this miracle touched them not at all.

They are borne, undizzied, thro' the rushing blue,

And build their empires on a sky-tossed ball.

Then said the king,

"If earth so lightly move,

What of my realm? O, what shall now stand sure?"

"Nought," said the dwarf, "in all this world, but love.

All else is dream-stuff and shall not endure.

'Tis nearer now!

Our universe hath no centre,

Our shadowy earth and fleeting heavens no stay,

But that deep inward realm which each can enter,

Even Jeppe, the dwarf, by his own secret way."

"Where?" said the king,

"O, where? I have not found it!"

"Here," said the dwarf, and music echoed "here."

"This infinite circle hath no line to bound it;

Therefore that deep strange centre is everywhere.

Let the earth soar thro' heaven, that centre abideth;

Or plunge to the pit, His covenant still holds true.

In the heart of a dying bird, the Master hideth;

In the soul of a king," said the dwarf, "and in my soul, too."

VII.

Princes and courtiers came, a few to seek A little knowledge, many more to gape In wonder at Tycho's gold and silver mask; Or when they saw the beauty of his towers, Envy and hate him for them.

Thus arose

The small grey cloud upon the distant sky, That broke in storm at last.

"Beware," croaked Jeppe,

Lifting his shaggy head beside the fire,

When guests like these had gone, "Master, beware!"

And Tycho of the frank blue eyes would laugh.

Even when he found Witichius playing him false,

His anger, like a momentary breeze,

Died on the dreaming deep; for Tycho Brahe

Turned to a nobler riddle,—"Have you thought,"

- He asked his young disciples, "how the sea
- Is moved to that strange rhythm we call the tides?
- He that can answer this shall have his name
- Honoured among the bearers of the torch While Pegasus flies above Uraniborg.
- I was delayed three hours or more today
- By the neap-tide. The fishermen on the coast
- Are never wrong. They time it by the moon.
- Post hoc, perhaps, not propter hoc; and yet
- Through all the changes of the sky and sea
- That old white clock of ours with the battered face
- Does seem infallible.

There's a love-song too, The sailors on the coast of Sweden sing,

- I have often pondered it. Your courtly poets
- Upbraid the inconstant moon. But these men know
- The moon and sea are lovers, and they move
- In a most constant measure. Hear the words
- And tell me, if you can, what silver chains
- Bind them together." Then, in a voice as low
- And rhythmical as the sea, he spoke that song:

The Shepherdess of the Sea.

Reproach not yet our sails' delay;
You cannot see the shoaling bay,
The banks of sand, the fretful bars,
That ebb left naked to the stars.
The sea's white shepherdess, the moon,
Shall lead us into harbour soon.

VOL. I. F

Dear, when you see her glory shine
Between your fragrant boughs of pine,
Know there is but one hour to wait
Before her hands unlock the gate,
And the full flood of singing foam
Follow her lovely footsteps home.

Then waves like flocks of silver sheep Come rustling inland from the deep, And into rambling valleys press Behind their heavenly shepherdess. You cannot see them? Lift your eyes

You cannot see them? Lift your eyes And see their mistress in the skies.

She rises with her silver bow.

I feel the tide begin to flow;
And every thought and hope and dream
Follow her call, and homeward stream.
Borne on the universal tide,
The wanderer hastens to his bride.
The sea's white shepherdess, the moon,
Shall lead him into harbour soon.

VIII.

He was a great magician, Tycho Brahe,
But not so great that he could read the
heart

Or rule the hand of princes.

When his friend

King Frederick died, the young Prince Christian reigned;

And, round him, fool and knave made common cause

Against the magic that could pour their gold

Into a gulf of stars. This Tycho Brahe

Had grown too proud. He held them in contempt,

So they believed; for, when he spoke, their thoughts

Crept at his feet like spaniels. Junkerdom Felt it was foolish, for he towered above it, And so it hated him. Did he not spend

Gold that a fool could spend as quickly as he?

- Were there not great estates bestowed upon him
- In wisdom's name, that from the dawn of time
- Had been the natural right of Junkerdom?
- And would he not bequeath them to his heirs,
- The children of Christine, an unfree woman?
- "Why you, sire, even you," they told the king,
- "He has made a laughing-stock. That horoscope
- He read for you, the night when you were born,
- Printed, and bound it in green velvet, too,—
- Read it. The whole world laughs at it. He said
- That Venus was the star that ruled your fate,
- And Venus would destroy you. Tycho Brahe
- Inspired your royal father with the fear

That kept your youth so long in leadingstrings,

The fear that every pretty hedgerow flower Would be your Circe. So he thought to avenge

Our mockery of this peasant-girl, Christine, To whom, indeed, he plays the faithful swine,

Knowing full well his gold and silver nose Would never win another."

Thus the sky

Darkened above Uraniborg, and those

Who dwelt within it, till one evil day,

One seeming happy day, when Tycho marked

The seven-hundredth star upon his chart, Two pompous officers from Walchendorp, The chancellor, knocked at Tycho's eastern gate.

"We are sent," they said, "to see and to report

What use you make of these estates of yours.

Your alchemy has turned more gold to lead

Than Denmark can approve. The uses now!

Show us the uses of this work of yours."

Then Tycho showed his tables of the stars,

Seven hundred stars, each noted in its place

With exquisite precision, the result

Of watching heaven for five-and-twenty years.

"And is this all?" they said.

They thought to invent

Some ground for damning him. The truth alone

Would serve them, as it seemed. For these were men

Who could not understand.

"Not all, I hope,"

Said Tycho, "for I think, before I die, I shall have marked a thousand."

"To what end?

When shall we reap the fruits of all this toil?

Show us its uses."

"In the time to come,"

Said Tycho Brahe, "perhaps a hundred years,

Perhaps a thousand, when our own poor names

Are quite forgotten, and our kingdoms dust, On one sure certain day, the torch-bearers Will, at some point of contact, see a light Moving upon this chaos. Though our eyes Be shut for ever in an iron sleep,

Their eyes shall see the kingdom of the law,

Our undiscovered cosmos. They shall see it,—

A new creation rising from the deep, Beautiful, whole.

We are like men that hear Disjointed notes of some supernal choir. Year after year, we patiently record All we can gather. In that far-off time,

A people that we have not known shall hear them,

Moving like music to a single end."

They could not understand: this life that sought

Only to bear the torch and hand it on;

And so they made report that all the dreams

Of Tycho Brahe were fruitless; perilous, too,

Since he avowed that any fruit they bore Would fall, in distant years, to alien hands.

Little by little, Walchendorp withdrew
His rents from Tycho Brahe, accusing him
Of gross neglects. The Chapel at Roskilde
Was falling into ruin. Tycho Brahe
Was Keeper of the Bones of Oldenburg,
He must rebuild the Chapel. All the
gifts

That Frederick gave to help him in his task,

- Were turned to stumbling-blocks; till, one dark day,
- He called his young disciples round him there,
- And in that mellow library of dreams,
- Lit by the dying sunset, poured his heart
- And mind before them, bidding them farewell.
- Through the wide-open windows as he spoke
- They heard the sorrowful whisper of the sea
- Ebbing and flowing around Uraniborg.
- "An end has come," he said, "to all we planned.
- Uraniborg has drained her treasury dry.
- Your Alma Mater now must close her gates
- On you, her guests; on me; and, worst of all,
- On one most dear, who made this place my home.
- For you are young, your homes are all to win,

- And you would all have gone your separate ways
- In a brief while; and, though I think you love
- Your college of the skies, it could not mean
- All that it meant to those who called it 'home.'
- You that have worked with me, for one brief year,
- Will never quite forget Uraniborg.
- This room, the sunset gilding all those books,
- The star-charts, and that old celestial globe,
- The long bright evenings by the winter fire,
- The talk that opened heaven, the songs you sung,
- Yes, even, I think, the tricks you played with Jeppe,
- Will somehow, when yourselves are growing old,

- Be hallowed into beauty, touched with tears,
- For you will wish they might be yours again.
- These have been mine for five-and-twenty years,
- And more than these,—the work, the dreams I shared
- With you, and others here. My heart will break
- To leave them. But the appointed time has come
- As it must come to all men.

You and I

- Have watched too many constant stars to dream
- That heaven or earth, the destinies of men
- Or nations, are the sport of chance. An end
- Comes to us all through blindness, age, or death.
- If mine must come in exile, it shall find me

Bearing the torch as far as I can bear it, Until I fall at the feet of the young runner, Who takes it from me, and carries it out of sight,

Into the great new age I shall not know,
Into the great new realms I must not tread.
Come, then, swift-footed, let me see you
stand

Waiting before me, crowned with youth and joy,

At the next turning. Take it from my hand,

For I am almost ready now to fall.

Something I have achieved, yes, though I say it,

I have not loitered on that fiery way. And if I front the judgment of the wise In centuries to come, with more of dread Than my destroyers, it is because this work Will be of use, remembered and appraised, When all their hate is dead.

I say the work,

- Not the blind rumour, the glory or fame of it.
- These observations of seven hundred stars
- Are little enough in sight of those great hosts
- Which nightly wheel around us, though I hope,
- Yes, I still hope, in some more generous land
- To make my thousand up before I die.
- Little enough, I know,—a midget's work!
- The men that follow me, with more delicate art
- May add their tens of thousands; yet my sum
- Will save them just that five-and-twenty years
- Of patience, bring them sooner to their goal,
- That kingdom of the law I shall not see.
- We are on the verge of great discoveries.
- I feel them as a dreamer feels the dawn
- Before his eyes are opened. Many of you

Will see them. In that day you will recall This, our last meeting at Uraniborg,

And how I told you that this work of ours

Would lead to victories for the coming age. The victors may forget us. What of that? Theirs be the palms, the shouting, and the praise.

Ours be the fathers' glory in the sons.
Ours the delight of giving, the deep joy

Of labouring, on the cliff's face, all night long,

Cutting them foot-holes in the solid rock,
Whereby they climb so gaily to the heights,
And gaze upon their new-discovered worlds.
You will not find me there. When you
descend,

Look for me in the darkness at the foot Of those high cliffs, under the drifted leaves.

That's where we hide at last, we pioneers, For we are very proud, and must be sought Before the world can find us, in our graves. There have been compensations. I have seen

In darkness, more perhaps than eyes can see When sunlight blinds them on the mountain-tops;

Guessed at a glory past our mortal range, And only mine because the night was mine.

Of those three systems of the universe,
The Ptolemaic, held by all the schools,
May yet be proven false. We yet may find
This earth of ours is not the sovereign lord
Of all those wheeling spheres. Ourselves
have marked

Movements among the planets that forbid Acceptance of it wholly. Some of these Are moving round the sun, if we can trust Our years of watching. There are stranger dreams.

This radical, Copernicus, the priest, Of whom I often talked with you, declares All of these movements can be reconciled, If—a hypothesis only—we should take The sun itself for centre, and assume
That this huge earth, so 'stablished, so
secure

In its foundations, is a planet also, And moves around the sun.

I cannot think it.

This leap of thought is yet too great for me.

I have no doubt that Ptolemy was wrong. Some of his planets move around the sun. Copernicus is nearer to the truth

In some things. But the planets we have watched

Still wander from the course that he assigned.

Therefore, my system, which includes the best

Of both, I hold may yet be proven true.

This earth of ours, as Jeppe declared one day,

So simply that we laughed, is 'much too big To move,' so let it be the centre still, And let the planets move around their sun; But let the sun with all its planets move Around our central earth.

This at the least

Accords with all we know, and saves mankind

From that enormous plunge into the night;

Saves them from vovaging for ten thousand vears

Through boundless darkness without sight of land:

Saves them from all that agony of loss, As one by one the beacon-fires of faith Are drowned in blackness.

I beseech you, then, Let me be proven wrong, before you take That darkness lightly. If at last you find The proven facts against me, take the plunge.

Launch out into that darkness. Let the lamps

Of heaven, the glowing hearth-fires that we knew VOL. I.

Die out behind you, while the freshening wind

Blows on your brows, and overhead you see The stars of truth that lead you from your home.

I love this island,—every little glen,

Hazel-wood, brook, and fish-pond; every bough

And blossom in that garden; and I hoped To die here. But it is not chance, I know, That sends me wandering through the world again.

My use perhaps is ended; and the power That made me, breaks me."

As he spoke, they saw
The tears upon his face. He bowed his
head

And left them silent in the darkened room. They saw his face no more.

The self-same hour, Tycho, Christine, and all their children, left Their island-home for ever. In their ship They took a few of the smaller instruments,

And that most precious record of the stars, His legacy to the future. Into the night They vanished, leaving on the ghostly cliffs

Only one dark, distorted, dog-like shape To watch them, sobbing, under its matted hair,

"Master, have you forgotten Jeppe, your dwarf?"

IX.

He was a great magician, Tycho Brahe, And yet his magic, under changing skies, Could never change his heart, or touch the hills

Of those far countries with the tints of home.

And, after many a month of wandering, He came to Prague; and, though with open hands

Rodolphe received him, like an exiled king,

A new Æneas, exiled for the truth (For so they called him), none could heal the wounds

That bled within, or lull his grief to sleep With that familiar whisper of the waves, Ebbing and flowing around Uraniborg.

Doggedly still he laboured; point by point, Crept on, with aching heart and burning brain,

Until his table of the stars had reached The thousand that he hoped, to crown his toil.

But Christine heard him murmuring in the night,

"The work, the work! Not to have lived in vain!

Into whose hands can I entrust it all?

I thought to find him standing by the way,
Waiting to seize the splendour from my
hand,

The swift, the young-eyed runner with the torch.

Let me not live in vain, let me not fall Before I yield it to the appointed soul." And yet the Power that made and broke

him heard:

For, on a certain day, to Tycho came
Another exile, guided through the dark
Of Europe by the starlight in his eyes,
Or that invisible hand which guides the
world.

He asked him, as the runner with the torch

Alone could ask, asked as a natural right For Tycho's hard-won life-work, those results,

His tables of the stars. He gave his name Almost as one who told him, It is I:

And yet unconscious that he told; a name

Not famous yet, though truth had marked him out

Already, by his exile, as her own,— The name of Johann Kepler.

"It was strange,"

Wrote Kepler, not long after, "for I asked Unheard-of things, and yet he gave them to me

As if I were his son. When first I saw him, We seemed to have known each other years ago

In some forgotten world. I could not guess

That Tycho Brahe was dying. He was quick

Of temper, and we quarrelled now and then,

Only to find ourselves more closely bound Than ever. I believe that Tycho died Simply of heartache for his native land.

For though he always met me with a smile

Or jest upon his lips, he could not sleep
Or work, and often unawares I caught
Odd little whispered phrases on his lips
As if he talked to himself, in a kind of
dream.

Yet I believe the clouds dispersed a little

- Around his deathbed, and with that strange joy
- Which comes in death, he saw the unchanging stars.
- Christine was there. She held him in her arms.
- I think, too, that he knew his work was safe.
- An hour before he died, he smiled at me,
- And whispered,—what he meant I hardly know—
- Perhaps a broken echo from the past,
- A fragment of some old familiar thought,
- And yet I seemed to know. It haunts me still:
- 'Come then, swift-footed, let me see you stand,
- Waiting before me, crowned with youth and joy;
- This is the turning. Take it from my hand. For I am ready, ready now, to fall."

III.

KEPLER.

- JOHN KEPLER, from the chimney corner, watched
- His wife Susannah, with her sleeves rolled back
- Making a salad in a big blue bowl.
- The thick tufts of his black rebellious hair
- Brushed into sleek submission; his trim beard
- Snug as the soft round body of a thrush
- Between the white wings of his fan-shaped ruff
- (His best, with the fine lace border) spoke of guests
- Expected; and his quick grey humorous eyes,

His firm red whimsical pleasure-loving mouth,

And all those elvish twinklings of his face, Were lit with eagerness. Only between his brows,

Perplexed beneath that subtle load of dreams,

Two delicate shadows brooded.

"What does it mean?

Sir Henry Wotton's letter breathed a hint That Italy is prohibiting my book,"

He muttered. "Then, if Austria damns it too,

Susannah mine, we may be forced to choose Between the truth and exile. When he comes,

He'll tell me more. Ambassadors, I suppose,

Can only write in cipher, while our world

Is steered to heaven by murderers and
thieves:

But, if he'd wrapped his friendly warnings up

In a verse or two, I might have done more work

These last three days, eh, Sue?"

"Look, John," said she,

"What beautiful hearts of lettuce? Tell me now

How shall I mix it? Will your English guest

Turn up his nose at dandelion leaves

As crisp and young as these? They've just the tang

Of bitterness in their milk that gives a relish

And makes all sweet; and that's philosophy, John.

Now—these spring onions! Would his Excellency

Like sugared rose-leaves better?"

"He's a poet,

Not an ambassador only, so I think

He'll like a cottage salad."

"A poet, John!

I hate their arrogant little insect ways!

I'll put a toadstool in."

"Poets, dear heart, Can be divided into two clear kinds,— One that, by virtue of a half-grown brain, Lives in a silly world of his own making,

A bubble, blown by himself, in which he flits

And dizzily bombinates, chanting 'I, I, I,'
For there is nothing in the heavens above
Or the earth, or hell beneath, but goes to
swell

His personal pronoun. Bring him some dreadful news

His dearest friend is burned to death,—You'll see

The monstrous insect strike an attitude

And shape himself into one capital I,

A rubric, with red eyes. You'll see him use

The coffin for his pedestal, hear him mouth

His 'I, I, I,' instructing haggard grief Concerning his odd ego. Does he chirp Of love, its 'I, I, I' Narcissus, love,
Myself, Narcissus, imaged in those eyes;
For all the love-notes that he sounds are
made

After the fashion of passionate grass-hoppers,

By grating one hind-leg across another.

Nor does he learn to sound that mellower 'You,'

Until his bubble bursts and leaves him drowned,

An insect in a soap-sud.

But there's another kind, whose mind still moves

In vital concord with the soul of things;
So that it thinks in music, and its thoughts
Pulse into natural song. A separate voice,
And yet caught up by the surrounding
choirs,

There, in the harmonies of the Universe, Losing himself, he saves his soul alive."
"John, I'm afraid!"—

"Afraid of what, Susannah?"—

- "Afraid to put those Ducklings on to roast.
- Your friend may miss his road; and, if he's late,
- My little part of the music will be spoiled."—
- "He won't, Susannah. Bad poets are always late.
- Good poets, at times, delay a note or two; But all the great are punctual as the sun.
- What's that? He's early! That's his knock, I think!"—
- "The Lord have mercy, John, there's nothing ready!
- Take him into your study and talk to him,
 Talk hard. He's come an hour before his
 time;
- And I've to change my dress. I'll into the kitchen!"
- Then, in a moment, all the cottage rang
 With greetings; hand grasped hand; his
 Excellency

Forgot the careful prologue he'd prepared, And made an end of mystery. He had brought

A message from his wisdom-loving king

Who, hearing of new menaces to the light

In Europe, urged the illustrious Kepler now

To make his home in England. There, his thought

And speech would both be free.

"My friend," said Wotton,

"I have moved in those old strongholds of the night,

And heard strange mutterings. It is not many years

Since Bruno burned. There's trouble brewing too,

For one you know, I think,—the Florentine Who made that curious optic tube."—

"You mean

The man at Padua, Galileo?"-

" Yes."

- "They will not dare or need. Proof or disproof
- Rests with their eyes."-
 - "Kepler, have you not heard
- Of those who, fifteen hundred years ago,
- Had eyes and would not see? Eyes quickly close
- When souls prefer the dark."—
- "So be it. Other and younger eyes will see.
- Perhaps that's why God gave the young a spice
- Of devilry. They'll go look, while elders gasp;
- And, when the Devil and Truth go hand in hand,
- God help their enemies. You will send my thanks,
- My grateful thanks, Sir Henry, to your king.
- To-day I cannot answer you. I must think.
- It would be very difficult. My wife

- Would find it hard to leave her native land.
- Say nothing yet before her."

Then, to hide

- Their secret from Susannah, Kepler poured
- His mind out, and the world's dead branches bloomed.
- For, when he talked, another spring began
- To which our May was winter; and, in the boughs
- Of his delicious thoughts, like feathered choirs,
- Bits of old rhyme, scraps from the Sabine farm,
- Celestial phrases from the Shepherd King,
- And fluttering morsels from Catullus sang.
- Much'was fantastic. All was touched with light
- That only genius knows to steal from heaven.
- He spoke of poetry, as the "flowering time

- Of knowledge," called it "thought in passionate tune
- With those great rhythms that steer the moon and sun;
- Thought in such concord with the soul of things
- That it can only move, like tides and stars,
- And man's own beating heart, and the wings of birds,
- In law, whose service only sets them free." Therefore it often leaps to the truth we seek.
- Clasping it, as a lover clasps his bride
 In darkness, ere the sage can light his lamp.
 And so, in music, men might find the road
 To truth, at many a point, where sages
 grope.

One day, a greater Plato would arise

To write a new philosophy, he said,

Showing how music is the golden clue

To all the windings of this world's dark

maze.

VOL. I. H

Himself had used it, partly proved it, too, In his own book,—the Harmonies of the World.

"All that the years discover points one way To this great ordered harmony," he said, "Revealed on earth by music. Planets

move

In subtle accord like notes of one great song

Audible only to the Artificer,

The Eternal Artist. There's no grief, no pain,

But music—follow it simply as a clue,

A microcosmic pattern of the whole—

Can show you, somewhere in its golden scheme,

The use of all such discords; and, at last,

Their exquisite solution. Then darkness breaks

Into diviner light, love's agony climbs

Through death to life, and evil builds up heaven.

Have you not heard, in some great symphony,

Those golden mathematics making clear

The victory of the soul? Have you not heard

The very heavens opening?

Do those fools

Who thought me an infidel then, still smile at me

For trying to read the stars in terms of song,

Discern their orbits, measure their distances,

By musical proportions? Let them smile, My folly at least revealed those three great laws;

Gave me the golden vases of the Egyptians, To set in the great new temple of my God Beyond the bounds of Egypt.

They will forget My methods, doubtless, as the years go by, And the world's wisdom shuts its music out. The dust will gather on all my harmonies; Or scholars turn my pages listlessly,
Glance at the musical phrases, and pass on,
Not troubling even to read one Latin page.
Yet they'll accept those great results as
mine

I call them mine. How can I help exulting, Who climbed my ladder of music to the skies

And found, by accident, let them call it so,
Or by the inspiration of that Power
Which built His world of music, those three
laws:—

First, how the speed of planets round the sun

Bears a proportion, beautifully precise As music, to their silver distances;

Next, that although they seem to swerve aside

From those plain circles of old Copernicus, Their paths were not less rhythmical and exact,

But followed always that most exquisite curve

- In its most perfect form, the pure ellipse;
- Third, that although their speed from point to point
- Appeared to change, their radii always moved
- Through equal fields of space in equal times.
- Was this my infidelity, was this
- Less full of beauty, less divine in truth,
- Than their dull chaos? You, the poet, will know
- How, as those dark perplexities grew clear,
- And old anomalous discords changed to song,
- My whole soul bowed and cried, Almighty God,
- These are Thy thoughts, I am thinking after Thee!
- I hope that Tycho knows. I owed so much
- To Tycho Brahe; for it was he who built The towers from which I hailed these
- The towers from which I hailed these three great laws.

How strange and far away it all seems now. The thistles grow upon that little isle Where Tycho's great Uraniborg once was. Yet, for a few sad years, before it fell Into decay and ruin, there was one Who crept about its crumbling corridors, And lit the fire of memory on its hearth.—Wotton looked quickly up, 'I think I have heard

Something of that. You mean poor Jeppe, his dwarf.

Fynes Moryson, at the Mermaid Inn one night

Showed a most curious manuscript, a scrawl

On yellow parchment, crusted here and there

With sea-salt, or the salt of those thick tears

Creatures like Jeppe, the crooked dwarf, could weep.

It had been found, clasped in a crooked hand,

Under the cliffs of Wheen, a crooked hand

That many a time had beckoned to passing ships,

Hoping to find some voyager who would take

A letter to its master.

The sailors laughed

And jeered at him, till Jeppe threw stones at them.

And now Jeppe, too, was dead, and one who knew

Fynes Moryson, had found him, and brought home

That curious crooked scrawl. Fynes Englished it

Out of its barbarous Danish. Thus it ran: 'Master, have you forgotten Jeppe, your dwarf.

Who used to lie beside the big log-fire

And feed from your own hand? The hall is dark,

There are no voices now,—only the wind And the sea-gulls crying round Uraniborg. I too am crying, Master, even I, Because there is no fire upon the hearth, No light in any window. It is night, And all the faces that I knew are gone.

Master, I watched you leaving us. I saw The white sails dwindling into sea-gull's wings,

Then melting into foam, and all was dark. I lay among the wild flowers on the cliff And dug my nails into the stiff white

chalk

And called you, Tycho Brahe. You did not hear;

But gulls and jackdaws, wheeling round my head,

Mocked me with Tycho Brahe, and Tycho Brahe!'

You were a great magician, Tycho Brahe; And, now that they have driven you away, I, that am only Jeppe,—the crooked dwarf, You used to laugh at for his matted hair, And head too big and heavy—take your pen Here in your study. I will write it down And send it by a sailor to the King

Of Scotland, and who knows, the mouse that gnawed

The lion free, may save you, Tycho Brahe."

"He is free now," said Kepler. "Had he lived,

He would have sent for Jeppe to join him there

At Prague. But death forestalled him, and your king.

The years in which he watched that planet Mars,

His patient notes and records, all were mine;

And, mark you, had he clipped or trimmed one fact

By even a hair's-breadth, so that his results

Made a pure circle of that planet's path,

It might have baffled us for an age and drowned

All our new light in darkness. But he held To what he saw. He might so easily, So comfortably have said, 'My instruments Are crude and fallible. In so fine a point Eyes may have erred, too. Why not acquiesce?

Why mar the tune, why dislocate a world, For one slight clash of seeming fact with faith?'

But no, though stars might swerve, he held his course,

Recording only what his eyes could see Until death closed them.

Then, to his results, I added mine and saw, in one wild gleam, Strange as the light of day to one born blind,

A subtler concord ruling them, and heard Profounder tones of harmony resolve Those broken melodies into song again."— "Faintly and far away, I, too, have seen

In music, and in verse, that golden clue
Whereof you speak," said Wotton. "In
all true song

There is a hidden logic. Even the rhyme

That, in bad poets, wrings the neck of thought,

Is like a subtle calculus to the true,
An instrument of discovery. It reveals
New harmonies, new analogies. It links
Far things and near, not in unnatural
chains.

But in those true accords which still escape
The plodding reason, yet unify the world.
I caught some glimpses of this mystic
power

In verses of your own, that elegy
On Tycho, and that great quatrain of
vours—

I cannot quite recall the Latin words,
But made it roughly mine in words like
these:

'I know that I am dust, and daily die;
Yet, as I trace those rhythmic spheres at
night,

I stand before the Thunderer's throne on high And feast on nectar in the halls of light.' My version lacks the glory of your lines But . . . "

"Mine too was a version," Kepler laughed,

"Turned into Latin from old Ptolemy's Greek;

For, even in verse, half of the joy, I think,

Is just to pass the torch from hand to hand

An undimmed splendour. But, last night, I tried

Some music all my own. I had a dream

That I was wandering in some distant world.

I have often dreamed it. Once it was the moon.

I wrote that down in prose. When I am dead,

It may be printed. This was a fairer dream;

For I was walking in a far-off spring Upon the planet, Venus. Only verse Could spread true wings for that delicious world;

And so I wrote it—for no eyes but mine, Or 'twould be seized on, doubtless, as fresh proof

Of poor old Kepler's madness."—

"Let me hear,

Madman to madman; for I, too, write verse."

Then Kepler, in a rhythmic murmur, breathed

His rich enchanted memories of that dream:

Beauty burned before me Swinging a lanthorn through that fragrant night.

I followed a distant singing, And a dreaming light.

How she led me, I cannot tell

To that strange world afar,

Nor how I walked, in that wild glen

Upon the sunset star.

Wingèd creatures floated
Under those rose-red boughs of violet
bloom,

With delicate forms unknown on Earth
'Twixt irised plume and plume;
Human-hearted, angel-eyed,
And crowned with unknown flowers;
For nothing in that enchanted world
Followed the way of ours.

Only I saw that Beauty,
On Hesper, as on earth, still held
command;
And though, as one in slumber,
I roamed that radiant land,
With all these earth-born senses sealed
To what the Hesperians knew,
The faithful lanthorn of her law
Was mine on Hesper too.

Then, half at home with wonder,

I saw strange flocks of flowers like
birds take flight;

Great trees that burned like opals

To lure their loves at night;

Dark beings that could move in realms

No dream of ours has known,

Till these became as common things

As men account their own.

Yet, when that lanthorn led me

Back to the world where once I

thought me wise;
I saw, on this my planet,

What souls, with awful eyes.

Hardly I dared to walk her fields

As in that strange re-birth
I looked on those wild miracles

The birds and flowers of earth.

Silence a moment held them, loth to break

The spell of that strange dream.

"One proof the more,"

Said Wotton at last, "that songs can mount and fly To truth; for this fantastic vision of yours Of life in other spheres, awakes in me, Either that slumbering knowledge of Soc-

rates,

Or some strange premonition that the years

Will prove it true. This music leads us far From all our creeds, except that faith in law.

Your quest for knowledge—how it rests on that!

How sure the soul is that if truth destroy

The temple, in three days the truth will
build

A nobler temple; and that order reigns

In all things. Even your atheist builds his doubt

On that strange faith; destroys his heaven and God

In absolute faith that his own thought is true

To law, God's lanthorn to our stumbling feet;

And so, despite himself, he worships God. For where true souls are, there are God and heaven."—

"It is an ancient wisdom. Long ago,"
Said Kenler, "under the glittering Faster

Said Kepler, "under the glittering Eastern sky,

The shepherd king looked up at those great stars,

Those ordered hosts, and cried Cæli narrant Gloriam Dei!

Though there be some to-day

Who'd ape Lucretius, and believe themselves

Epicureans, little they know of him

Who, even in utter darkness, bowed his head,

To something nobler than the gods of Rome

Reigning beyond the darkness.

They accept

The law, the music of these ordered worlds;

VOL. I.

And straight deny the law's first postulate, That out of nothingness nothing can be born,

Nor greater things from less. Can music rise By chance from chaos, as they said that star

In Serpentarius rose? I told them, then,
That when I was a boy, with time to spare,
I played at anagrams. Out of my Latin
name

Johannes Keplerus came that sinister phrase Serpens in akuleo. Struck by this,

I tried again, but trusted it to chance.

I took some playing-cards, and wrote on each

One letter of my name. Then I began

To shuffle them; and, at every shuffle, I
read

The letters, in their order, as they came, To see what meaning chance might give to them.

Wotton, the gods and goddesses must have laughed

To see the weeks I lost in studying chance; For had I scattered those cards into the black

Epicurean eternity, I'll swear

They'd still be playing at leap-frog in the dark,

And show no glimmer of sense. And yet
—to hear

Those wittols talk, you'd think you'd but to mix

A bushel of good Greek letters in a sack And shake them roundly for an age or so, To pour the Odyssey out.

At last, I told

Those disputants what my wife had said One night

When I was tired and all my mind a-dust.

With pondering on their atoms, I was called

To supper, and she placed before me there A most delicious salad. 'It would appear,'

I thought aloud, 'that if these pewter dishes,

Green hearts of lettuce, tarragon, slips of thyme,

Slices of hard-boiled egg, and grains of salt,

With drops of water, vinegar and oil,

Had in a bottomless gulf been flying about

From all eternity, one sure certain day

The sweet invisible hand of Happy Chance Would serve them as a salad.'

'Likely enough,'

My wife replied, 'but not so good as mine,

Nor so well dressed.'

They laughed. Susannah's voice

Broke in, 'I've made a better one. The receipt

Came from the Golden Lion. I have dished

Ducklings and peas and all. Come, John, say grace."

IV.

GALILEO.

I.

(Celeste, in the Convent at Arcetri, writes to her old lover at Rome.)

My friend, my dearest friend, my own dear love,

I, who am dead to love, and see around me The funeral tapers lighted, send this cry

Out of my heart to yours, before the end.

You told me once you would endure the rack

To save my heart one pang. O, save it now!

Last night there came a dreadful word from Rome

For my dear lord and father, summoning him

Before the inquisitors there, to take his trial

At threescore years and ten. There is a threat

Of torture, if his lips will not deny The truth his eyes have seen.

You know my father,

You know me, too. You never will believe

That he and I are enemies of the faith.

Could I, who put away all earthly love,

Deny the Cross to which I nailed this flesh?

Could he, who, on the night when all those heavens

Opened above us, with their circling worlds, Knelt with me, crushed beneath that weight of glory,

Forget the Maker of that glory now?

You'll not believe it. Neither would the Church.

Had not his enemies poisoned all the springs

And fountain-heads of truth. It is not Rome

That summons him, but Magini, Sizy, Scheiner,

Lorini, all the blind, pedantic crew

That envy him his fame, and hate his works

For dwarfing theirs.

Must such things always be

When truth is born?

Only five nights ago we walked together,

My father and I, here in the Convent garden;

And, as the dusk turned everything to dreams,

We dreamed together of his work well done

And happiness to be. We did not dream

That even then, muttering above his book,

His enemies, those enemies whom the

Stings into hate, were plotting to destroy him.

- Yet something shadowed him. I recall his words—
- "The grapes are ripening. See, Celeste, how black
- And heavy. We shall have good wine this year."—
- "Yes, all grows ripe," I said, "your lifework, too,
- Dear father. Are you happy now to know Your book is printed, and the new world born?"
- He shook his head, a little sadly, I thought. "Autumn's too full of endings. Fruits grow ripe
- And fall, and then comes winter."
 - "Not for you!
- Never," I said, "for those who write their names
- In heaven. Think, father, through all ages now
- No one can ever watch that starry sky Without remembering you. Your fame . . ."

And there

He stopped me, laid his hand upon my arm, And standing in the darkness with dead leaves

Drifting around him, and his bare grey head

Bowed in complete humility, his voice

Shaken and low, he said like one in prayer, "Celeste, beware of that. Say truth, not

Celeste, beware of that. Say truth, not fame.

If there be any happiness on earth,

It springs from truth alone, the truth we live

In act and thought. I have looked up there and seen

Too many worlds to talk of fame on earth.

Fame, on this grain of dust among the stars,

The trumpet of a gnat that thinks to halt

The great sun-clusters moving on their way In silence! Ves. that's fame. But truth.

In silence! Yes, that's fame. But truth, Celeste.

Truth and its laws are constant, even up there;

That's where one man may face and fight the world.

His weakness turns to strength. He is made one

With universal forces, and he holds

The password to eternity.

Gate after gate swings back through all the heavens.

No sentry halts him, and no flaming sword. Say truth, Celeste, not fame."

"No, for I'll say

A better word," I told him. "I'll say love."

He took my face between his hands and said—

His face all dark between me and the stars—

"What's love, Celeste, but this dear face of truth

Upturned to heaven."

He left me, and I heard,

Some twelve hours later, that this man whose soul

Was dedicate to truth, was threatened now

With torture, if his lips did not deny The truth he loved.

I tell you all these things Because to help him, you must understand him;

And even you may doubt him, if you hear Only those plausible outside witnesses Who never heard his heart-beats as have I. So let me tell you all—his quest for truth, And how this hate began.

Even from the first,

He made his enemies of those almostminds

Who chanced upon some new thing in the dark

And could not see its meaning, for he saw, Always, the law illumining it within.

So when he heard of that strange opticglass

Which brought the distance near, he thought it out

By reason, where that other hit upon it Only by chance. He made his telescope; And O, how vividly that day comes back, When in their gorgeous robes the Senate stood

Beside him on that high Venetian tower, Scanning the bare blue sea that showed no speck

Of sail. Then, one by one, he bade them look;

And one by one they gasped, "a miracle." Brown sails and red, a fleet of fishing boats,

See how the bright foam bursts around their bows!

See how the bare-legged sailors walk the decks!

Then, quickly looking up, as if to catch The vision, ere it tricked them, all they saw Was empty sea again.

Many believed

That all was trickery, but he bade them note

- The colours of the boats, and count their sails.
- Then, in a little while, the naked eye
- Saw on the sky-line certain specks that grew,
- Took form and colour; and, within an hour,
- Their magic fleet came foaming into port.
- Whereat old senators, wagging their white beards,
- And plucking at golden chains with stiff old claws
- Too feeble for the sword-hilt, squeaked at once:
- "This glass will give us great advantages In time of war."
 - War, war, O God of love,
- Even amidst their wonder at Thy world,
- Dazed with new beauty, gifted with new powers,
- These old men dreamed of blood. This was the thought
- To which all else must pander, if he hoped

Even for one hour to see those dull eyes blaze

At his discoveries.

"Wolves," he called them, "wolves";
And yet he humoured them. He stooped to them,

Promised them more advantages, and talked

As elders do to children. You may call it Weakness, and yet could any man do more, Alone, against a world, with such a trust To guard for future ages? All his life He has had some weanling truth to guard, has fought

Desperately to defend it, taking cover
Wherever he could, behind old fallen trees
Of superstition, or ruins of old thought.
He has read horoscopes to keep his work
Among the stars in favour with his prince.
I tell you this that you may understand
What seems inconstant in him. It may be
That he was wrong in these things, and
must pay

A dreadful penalty. But you must explore His mind's great ranges, plains and lonely peaks

Before you know him, as I know him now. How could he talk to children, but in words

That children understand? Have not some said

That God Himself has made His glory dark

For men to bear it. In his human sphere My father has done this.

War was the dream

That filmed those old men's eyes. They did not hear

My father, when he hinted at his hope
Of opening up the heavens for mankind
With that new power of bringing far things
near.

My heart burned as I heard him; but they blinked

Like owls at noonday. Then I saw him turn,

Desperately, to humour them, from thoughts

Of heaven to thoughts of warfare.

Late that night

My own dear lord and father came to me And whispered, with a glory in his face

As one who has looked on things too beautiful

To breathe aloud, "Come out, Celeste, and see

A miracle."

I followed him. He showed me, Looking along his outstretched hand, a star,

A point of light above our olive-trees.

It was the star called Jupiter. And then

He bade me look again, but through his glass.

I feared to look at first, lest I should see Some wonder never meant for mortal eyes.

He too had felt the same, not fear, but awe,

As if his hand were laid upon the veil Between this world and heaven.

Then . . . I, too, saw,

Small as the smallest bead of mist that clings

To a spider's thread at dawn, the floating disk

Of what had been a star, a planet now,

And near it, with no disk that eyes could see,

Four needle-points of light, unseen before.

"The moons of Jupiter," he whispered low,

I have watched them as they moved, from night to night;

A system like our own, although the world Their fourfold lights and shadows make so strange

Must—as I think—be mightier than we dreamed,

A Titan planet. Earth begins to fade

And dwindle; yes, the heavens are opening now.

VOL. I.

Perhaps up there, this night, some lonely soul

Gazes at earth, watches our dawning moon, And wonders, as we wonder."

In that dark

We knelt together . . .

Very strange to see

The vanity and fickleness of princes.

Before his enemies had provoked the wrath Of Rome against him, he had given the name

Of Medicean stars to those four moons
In honour of Prince Cosmo. This aroused
The court of France to seek a lasting
place

Upon the map of heaven. A letter came
Beseeching him to find another star
Even more brilliant, and to call it *Henri*After the reigning and most brilliant prince
Of France. They did not wish the family
name

Of Bourbon. This would dissipate the glory.

No, they preferred his proper name of Henri.

We read it together in the garden here,

Weeping with laughter, never dreaming then

That this, this, could stir the little hearts

Of men to envy.

O, but afterwards,

The blindness of the men who thought themselves

His enemies. The men who never knew him,

The men that had set up a thing of straw

And called it by his name, and wished to burn

Their image and himself in one wild fire.

Men? Were they men or children? 'They refused

Even to look through Galileo's glass,

Lest seeing might persuade them. Even that sage,

That great Aristotelian, Julius Libri,

Holding his breath there, like a fractious child

Until his cheeks grew purple, and the veins Were bursting on his brow, swore he would die

Sooner than look.

And that poor monstrous babe

Not long thereafter, kept his word and died,

Died of his own pent rage, as I have heard.

Whereat my lord and father shook his head

And, smiling, somewhat sadly—oh, you know

That smile of his, more deadly to the false Than even his reasoning — murmured, "Libri, dead,

Who called the moons of Jupiter absurd!

He swore he would not look at them from earth.

I hope he saw them on his way to heaven." Welser in Augsburg, Clavius at Rome,

Scoffed at the fabled moons of Jupiter.

It was a trick, they said. He had made a glass

To fool the world with false appearances.

Perhaps the lens was flawed. Perhaps his wits

Were wandering. Anything rather than the truth

Which might disturb the mighty in their seat.

"Let Galileo hold his own opinions.

I, Clavius, will hold mine."

He wrote to Kepler:

"You, Kepler, are the first, whose open mind

And lofty genius could accept for truth

The things which I have seen. With you for friend.

The abuse of the multitude will not trouble me.

Jupiter stands in heaven and will stand, Though all the sycophants bark at him.

In Pisa

Florence, Bologna, Venice, Padua,
Many have seen the moons. These witnesses

Are silent and uncertain. Do you wonder? Most of them could not, even when they saw them,

Distinguish Mars from Jupiter. Shall we side

With Heraclitus or Democritus?
I think, my Kepler, we will only laugh
At this immeasurable stupidity.
Picture the leaders of our college here.

A thousand times I have offered them the proof

Of their own eyes. They sleep here, like gorged snakes,

Refusing even to look at planets, moons,
Or telescope. They think philosophy
Is all in books, and that the truth is found
Neither in nature, nor the Universe,
But in comparing texts. How you would
laugh

Had you but heard our first philosopher

Before the Grand Duke, trying to tear down

And argue the new planets out of heaven,

Now by his own weird logic and closed eyes

And now by magic spells."

How could he help

Despising them a little? It's an error

Even for a giant to despise a midge;

For, when the giant reels beneath some stroke

Of fate, the buzzing clouds will swoop upon him,

Cluster and feed upon his bleeding wounds, And do what midges can to sting him blind.

These human midges have not missed their chance.

They have missed no smallest spot upon that sun.

My mother was not married—they have found—

To my dear father. All his children, then,

And doubtless all their thoughts are evil, too;

But who that judged him ever sought to know

Whether, as evil sometimes wears the cloak

Of virtue, nobler virtue in this man

Might wear that outward semblance of a sin?

Yes, even you who love me, may believe

These thoughts are born of my own tainted heart;

And yet I write them, kneeling in my cell And whisper them to One who blesses me

Here, from His Cross, upon the bare grey wall.

So, if you love me, bless me also, you,

By helping him. Make plain to all you meet

What part his enemies have played in this.

How some one, somehow, altered the command

Laid on him all those years ago, by Rome,

So that it reads to-day as if he vowed Never to think or breathe that this round earth

Moves with its sister-planets round the sun.

'Tis true he promised not to write or speak

As if this truth were 'stablished equally With God's eternal laws; and so he wrote His Dialogues, reasoning for it, and against, And gave the last word to Simplicius, Saying that human reason must bow down Before the power of God.

And even this

His enemies have twisted to a sneer Against the Pope, and cunningly declared Simplicius to be Urban.

Why, my friend,

There were three dolphins on the title-page,

Each with the tail of another in its mouth.

The censor had not seen this, and they swore

It held some hidden meaning. Then they found

The same three dolphins sprawled on all the books

Landini printed at his Florence press.

They tried another charge.

I am not afraid

Of any truth that they can bring against him;

But, O, my friend, I more than fear their lies.

I do not fear the justice of our God;

But I do fear the vanity of men;

Even of Urban; not His Holiness,

But Urban, the weak man, who may resent,

And in resentment rush half-way to meet

This cunning lie with credence. Vanity!

O, half the wrongs on earth arise from that!

Greed, and war's pomp, all envy, and most hate,

- Are born of that; while one dear humble heart,
- Beating with love for man, between two thieves,
- Proves more than all His wounds and miracles
- Our Crucified to be the Son of God.
- Say that I long to see him; that my prayers
- Knock at the gates of mercy, night and day.
- Urge him to leave the judgment now with God
- And strive no more.
 - If he be right, the stars
- Fight for him in their courses. Let him bow
- His poor, dishonoured, glorious, old grey head
- Before this storm, and then come home to me.
- O, quickly, or I fear 'twill be too late; For I am dying. Do not tell him this;

But I must live to hold his hands again, And know that he is safe.

I dare not leave him, helpless and half blind,

Half father and half child, to rack and cord.

By all the Christ within you, save him, you;

And, though you may have ceased to love me now,

One faithful shadow in your own last hour Shall watch beside you till all shadows die,

And heaven unfold to bless you where I failed.

II.

(Scheiner writes to Castelli, after the Trial.)

What think you of your Galileo now,
Your hero that like Ajax should defy
The lightning? Yesterday I saw him
stand

Trembling before our court of Cardinals,

Trembling before the colour of their robes

As sheep, before the slaughter, at the sight

And smell of blood. His lips could hardly speak,

And—mark you—neither rack nor cord had touched him.

Out of the Inquisition's five degrees

Of rigor: first, the public threat of torture;

Second, the repetition of the threat

Within the torture-chamber, where we show

The instruments of torture to the accused;

Third, the undressing and the binding; fourth,

Laying him on the rack; then, fifth and last,

Torture, territio realis; out of these,

Your Galileo reached the second only,

When, clapping both his hands against his sides,

He whined about a rupture that forbade

These extreme courses. Great heroic soul

Dropped like a cur into a sea of terror,

He sank right under. Then he came up gasping,

Ready to swear, deny, abjure, recant,

Anything, everything! Foolish, weak, old man,

Who had been so proud of his discoveries,

And dared to teach his betters. How we grinned

To see him kneeling there and whispering thus,

Through his white lips, bending his old grey head:

" I, Galileo Galilei, born

A Florentine, now seventy years of age,

Kneeling before you, having before mine eyes,

And touching with my hands the Holy Gospels,

Swear that I always have believed, do now,

And always will believe what Holy Church

Has held and preached and taught me to believe;

And now, whereas I rightly am accused,
Of heresy, having falsely held the sun
To be the centre of our Universe,
And also that this earth is not the centre,
But moves;
I most illogically desire
Completely to expunge this dark suspicion,

So reasonably conceived. I now abjure,
Detest and curse these errors; and I swear
That should I know another, friend or foe,
Holding the selfsame heresy as myself,
I will denounce him to the Inquisitor
In whatsoever place I chance to be.
So help me God, and these His holy Gospels,
Which with my hands I touch."

You will observe

His promise to denounce. Beware, Castelli!

What think you of your Galileo now?

III.

(Castelli writes, enclosing Scheiner's letter to Campanella.)

What think I? This,—that he has laid his hands

Like Samson on the pillars of our world,

And one more trembling utterance such as this

Will overwhelm us all.

O, Campanella,

You know that I am loyal to our faith, As Galileo too has always been.

You know that I believe, as he believes,

In the one Catholic Apostolic Church;

Yet there are many times when I could wish

That some blind Samson would indeed tear down

All this proud temporal fabric, made with hands,

And that, once more, we suffered with our Lord,

Were persecuted, crucified with Him.

I tell you, Campanella, on that day

When Galileo faced our Cardinals,

A veil was rent for me. There, in one flash,

I saw the eternal tragedy, transformed Into new terms. I saw the Christ once more,

Before the court of Pilate. Peter there
Denied Him once again; and, as for me,
Never has all my soul so humbly knelt
To God in Christ, as when that sad old
man

- Bowed his grey head, and knelt—at seventy years—
- To acquiesce, and shake the world with shame.
- He shall not strive or cry! Strange, is it not,
- How nearly Scheiner—even amidst his hate—

VOL. I.

Quoted the Prophets? Do we think this world

So greatly bettered, that the ancient cry, "Despised, rejected, hails our God no more?"

IV.

(Celeste writes to her father in his imprisonment at Siena.)

Dear father, it will seem a thousand years Until I see you home again and well.

I would not have you doubt that all this time

I have prayed for you continually. I saw

A copy of your sentence. I was grieved;
And yet it gladdened me, for I found a
way

To be of use, by taking on myself Your penance. Therefore, if you fail in this,

If you forget it—and indeed, to save you

The trouble of remembering it—your child Will do it for you.

Ah, could she do more How willingly would your Celeste endure A straiter prison than she lives in now To set you free.

"A prison," I have said;

And yet, if you were here, 'twould not be so.

When you were pent in Rome, I used to say,

"Would he were at Siena!" God fulfilled

That wish. You are at Siena; and I now say

Would he were at Arcetri.

So perhaps

Little by little, angels can be wooed .

Each day, by some new prayer of mine or yours,

To bring you wholly back to me, and save Some few of the flying days that yet remain. You see, these other Nuns have each their friend,

Their patron Saint, their ever near devoto,

To whom they tell their joys and griefs; but I

Have only you, dear father, and if you

Were only near me, I could want no more.

Your garden looks as if it missed your love.

The unpruned branches lean against the wall

To look for you. The walks run wild with flowers.

Even your watch-tower seems to wait for you;

And, though the fruit is not so good this year

(The vines were hurt by hail, I think, and thieves

Have climbed the wall too often for the pears),

The crop of peas is good, and only waits Your hand to gather it.

In the dovecote, too,

You'll find some plump young pigeons. We must make

A feast for your return.

In my small plot,

Here at the Convent, better watched than yours,

I raised a little harvest. With the price

I got for it, I had three Masses said For my dear father's sake.

v.

(Galileo writes to his friend Castelli, after his return to Arcetri.)

Castelli, O Castelli, she is dead.

I found her driving death back with her soul

Till I should come.

I could not even see

Her face.—These useless eyes had spent their power

On distant worlds, and lost that last faint look

Of love on earth.

I am in the dark, Castelli, Utterly and irreparably blind.

The Universe which once these outworn eyes

Enlarged so far beyond its ancient bounds
Is henceforth shrunk into that narrow
space

Which I myself inhabit.

Yet I found

Even in the dark, her tears against my face,

Her thin soft childish arms around my neck,

And her voice whispering . . . love, undying love;

Asking me, at this last, to tell her true, If we should meet again.

Her trust in me

Had shaken her faith in what my judges held:

- And, as I felt her fingers clutch my hand,
- Like a child drowning, "Tell me the truth," she said,
- "Before I lose the light of your dear face"—
- It seemed so strange that dying she could see me
- While I had lost her,—"tell me, before I go."
- "Believe in Love," was all my soul could breathe.
- I heard no answer. Only I felt her hand Clasp mine and hold it tighter. Then she died,
- And left me to my darkness. Could I guess
- At unseen glories, in this deeper night,
- Make new discoveries of profounder realms,
- Within the soul? O, could I find Him there,
- Rise to Him through His harmonies of law And make His will my own!

This much, at least,

I know already, that—in some strange way—

His law implies His love; for, failing that All grows discordant, and the primal Power Ignobler than His children.

So I trust

One day to find her, waiting for me still, When all things are made new.

I raise this torch

Of knowledge. It is one with my right hand,

And the dark sap that keeps it burning flows

Out of my heart; and yet, for all my faith,

It shows me only darkness.

Was I wrong?

Did I forget the subtler truth of Rome

And, in my pride, obscure the world's one light?

Did I subordinate to this moving earth Our swiftlier-moving God?

O, my Celeste,

Once, once at least, you knew far more than I;

And she is dead, Castelli, she is dead.

VI.

(Viviani, many years later, writes to a friend in England.)

I was his last disciple, as you say
I went to him, at seventeen years of age,
And offered him my hands and eyes to
use,

When, voicing the true mind and heart of Rome,

Father Castelli, his most faithful friend, Wrote, for my master, that compassionate plea:

The noblest eye that Nature ever made
Is darkened; one so exquisitely dowered,
So delicate in power that it beheld
More than all other eyes in ages gone
And opened the eyes of all that are to come.

But, out of England, even then, there shone

The first ethereal promise of the light

That crowns my master dead. Well I recall

That day of days. There was no faintest breath

Among his garden cypress-trees. They dreamed

Dark, on a sky too beautiful for tears,

And the first star was trembling overhead,

When, quietly as a messenger from heaven,

Moving unseen, through his own purer realm,

Amongst the shadows of our mortal world, A young man, with a strange light on his face

Knocked at the door of Galileo's house.

His name was Milton.

By the hand of God,

He, the one living soul on earth with power

To read the starry soul of this blind man,

Was led through Italy to his prison door. He looked on Galileo, touched his hand . . . O, dark, dark, dark, amid the blaze of noon, Irrecoverably dark. . . .

In after days,

He wrote it; but it pulsed within him then;

And Galileo rising to his feet

And turning on him those unseeing eyes

That had searched heaven and seen so many worlds,

Said to him, "You have found me."

Often he told me in those last sad months
Of how your grave young island poet
brought

Peace to him, with the knowledge that, far off,

In other lands, the truth he had proclaimed

Was gathering power.

Soon after, death unlocked His prison, and the city that he loved,

Florence, his town of flowers, whose gates in life

He was forbid to pass, received him dead.

You write to me from England, that his name

Is now among the mightiest in the world, And in his name I thank you.

I am old;

And I was very young when, long ago, I stood beside his poor dishonoured grave Where hate denied him even an epitaph; And I have seen, slowly and silently, His purer fame arising, like a moon In marble on the twilight of those aisles At Santa Croce, where the dread decree Was read against him.

Now, against two wrongs, Let me defend two victims: first, the Church

Whom many have vilified for my master's doom;

And second, Galileo, whom they reproach

Because they think that in his blind old

He might with one great eagle's glance have cowed

His judges, played the hero, raised his hands

Above his head, and posturing like a mummer

Cried (as one empty rumour now declares)

After his recantation—yet, it moves!

Out of this wild confusion, fourfold wrongs

Are heaped on both sides.—I would fain bring peace,

The peace of truth to both before I die;

And, as I hope, rest at my master's feet.

It was not Rome that tried to murder truth;

But the blind hate and vanity of man-

Had Galileo but concealed the smile

With which, like Socrates, he answered fools,

They would not, in the name of Christ, have mixed

This hemlock in His chalice.

O pitiful,

Pitiful human hearts that must deny
Their own unfolding heavens, for one light
word

Twisted by whispering malice.

Did he mean

Simplicio, in his dialogues, for the Pope?

Doubtful enough—the name was borrowed straight

From older dialogues.

If he gave one thought

Of Urban's to Simplicio—you know well How composite are all characters in books, How authors find their colours here and there,

And paint both saints and villains from themselves.

No matter. This was Urban. Make it clear.

Simplicio means a simpleton. The saints

Are roused by ridicule to most human

wrath.

- Urban was once his friend. This hint of ours
- Kills all of that. And so we mortals close
- The doors of Love and Knowledge on the world.
- And so, for many an age, the name of Christ
- Has been misused by man to mask man's hate.
- How should the Church escape, then? I who loved
- My master, know he had no truer friend
- Than many of those true servants of the Church,
- Fathers and priests who, in their lowlier sphere,
- Moved nearer than her cardinals to the Christ.
- These were the very Rome, and held her keys.
- Those who charge Rome with hatred of the light

- Would charge the sun with darkness, and accuse
- This dome of sky for all the blood-red wrongs
- That men commit beneath it. Art and song
- That found her once in Europe their sole shrine
- And sanctuary absolve her from that stain.
- But there's this other charge against my friend,
- And master, Galileo. It is brought
- By friends, made sharper by their pity and grief,
- The charge that he refused his martyrdom And-so denied his own high faith.

Whose faith,—

- His friends', his Protestant followers', or his own?
- Faced by the torture, that sublime old man

- Was still a faithful Catholic, and his thought
- Plunged deeper than his Protestant followers knew.
- His aim was not to strike a blow at Rome But to confound his enemies. He believed As humbly as Castelli or Celeste
- That there is nothing absolute but that Power
- With which his Church confronted him.

 To this
- He bowed his head, acknowledging that his light
- Was darkness; but affirming, all the more,
- That Ptolemy's light was even darker yet.
- Read your own Protestant Milton, who derived
- His mighty argument from my master's lips:
- "Whether the sun predominant in heaven
- Rise on the earth, or earth rise on the sun;
- Leave them to God above; Him serve and fear."

VOL. I.

Just as in boyhood, when my master watched

The swinging lamp in the cathedral there
At Pisa; and, by one finger on his pulse,
Found that, although the great bronze
miracle swung

Through ever-shortening spaces, yet it moved

More slowly, and so still swung in equal times;

He straight devised another boon to man, Those pulse - clocks which by many a fevered bed

Our doctors use; dreamed of that timepiece, too,

Whose punctual swinging pendulum on earth

Measures the starry periods, and to-day Talks peacefully to children by the fire Like an old grandad full of ancient tales, Remembering endless ages, and foretelling Eternities to come; but, all the while There, in the dim cathedral, he knew well, That dreaming youngster, with his tawny mane

Of red-gold hair, and deep ethereal eyes,

What odorous clouds of incense round him rose;

Was conscious in the dimness, of great throngs

Kneeling around him; shared in his own heart

The music and the silence and the cry, O salutaris hostia!—so now,

There was no mortal conflict in his mind Between his dream - clocks and things absolute,

And one far voice, most absolute of all, Feeble with suffering, calling night and day "Return, return," the voice of his Celeste. All these things co-existed, and the less Were comprehended, like the swinging lamp,

Within that great cathedral of his soul. Often he bade me, in that desolate house, Il Giojello, of old a jewel of light, Read to him one sad letter, till he knew
The most of it by heart, and while he
walked

His garden, leaning on my arm, at times I think he quite forgot that I was there; For he would quietly murmur it to him-

self,

As if she had sent it, half an hour ago:

"Now, with this little Winter's gift of fruit

I send you, father, from our southward wall,

Our convent's rarest flower, a Christmas rose.

At this cold season, it should please you much,

Seeing how rare it is; but, with the rose,

You must accept its thorns, which bring to mind

Our Lord's own bitter Passion. Its green leaves

Image the hope that through His Passion we,

After this winter of our mortal life, May find the beauty of an eternal spring In heaven."

Praise me the martyr, out of whose agonies Some great new hope is born, but not the fool

Who starves his heart to prove what eyes can see

And intellect confirm throughout the world.

Why must he follow the idiot schoolboy code,

Torture her soul to reinforce the sight Of those that closed their eyes and would

not see.

To your own men of science, fifty turns
Of the thumbscrew would not prove that
earth revolved.

Call it Italian subtlety if you will,

I say his intricate cause could not be won

By blind heroics. Much that his enemies challenged

Was not yet wholly proven, though his mind

- Had leapt to a certainty. He must leave the rest
- To those that should come after, swift and young,—
- Those runners with the torch for whom he longed
- As his deliverers. Had he chosen death
- Before his hour, his proofs had been obscured
- For many a year. His respite gave him time
- To push new pawns out, in the blindfold play
- Of those last months, and checkmate, not the Church
- But those that hid behind her. He believed
- His truth was all harmonious with her own.
- How could he choose between them?

 Must be die
- To affirm a discord that himself denied?
 On many a point, he was less sure than we:
 But surer far of much that we forget.

- The movements that he saw he could but judge
- By some fixed point in space. He chose the sun.
- Could this be absolute? Could he then be sure
- That this great sun did not with all its worlds
- Move round a deeper centre? What became
- Of your Copernicus then? Could he be sure
- Of any unchanging centre, whence to judge
- This myriad-marching universe, but one— The absolute throne of God.

Affirming this

Eternal Rock, his own uncertainties .

Became more certain, and although his lips Breathed not a syllable of it, though he

stood

Silent as earth that also seemed so still, The very silence thundered, yet it moves! He held to what he knew, secured his work

Through feeble hands like mine, in other lands,

Not least in England, as I think you know.

For, partly through your poet, as I believe,

When his great music rolled upon your skies,

New thoughts were kindled in the general mind.

'Twas at Arcetri that your Milton gained The first great glimpse of his celestial realm.

Picture him,—still a prisoner of our light, Closing his glorious eyes—that in the dark, He might behold this wheeling universe,— The planets gilding their ethereal horns With sun-fire. Many a pure immortal phrase

In his own work, as I have pondered it, Lived first upon the lips of him whose eyes Were darkened first,—in whom, too, Milton found

That Samson Agonistes, not himself,

As many have thought, but my dear master dead.

These are a part of England's memories now,

The music blown upon her sea-bright air

When, in the year of Galileo's death,

Newton, the mightiest of the sons of light,

Was born to lift the splendour of this torch

And carry it, as I heard that Tycho said

Long since to Kepler, "Carry it out of sight,

Into the great new age I must not know,

Into the great new realm I must not tread."

V.

NEWTON.

I.

"If I saw farther, 'twas because I stood On giant shoulders," wrote the king of thought,

Too proud of his great line to slight the toils

Of his forebears. He turned to their dim past,

Their fading victories and their fond defeats,

And knelt as at an altar, drawing all Their strengths into his own; and so went forth

With all their glory shining in his face, To win new victories for the age to come.

- So, where Copernicus had destroyed the dream
- We called our world; where Galileo watched
- Those ancient firmaments melt, a thin blue smoke
- Into a vaster night; where Kepler heard Only stray fragments, isolated chords
- Of that tremendous music which should bind
- All things anew in one, Newton arose And carried on their fire.

Around him reeled

- Through lingering fumes of hate and clouds of doubt,
- Lit by the afterglow of the Civil War,
- The dissolute throngs of that Walpurgis night
- Where all the cynical spirits that deny
- Danced with the vicious lusts that drown the soul
- In flesh too gross for Circe or her swine.

- But, in his heart, he heard one instant voice.
- "On with the torch once more, make all things new,
- Build the new heaven and earth, and save the world."
- Ah, but the infinite patience, the long months
- Lavished on tasks that, to the common eye,
- Were insignificant, never to be crowned
- With great results, or even with earth's rewards.
- Could Rembrandt but have painted him, in those hours
- Making his first analysis of light
- Alone, there, in his darkened Cambridge room
- At Trinity! Could he have painted, too,
- The secret glow, the mystery, and the power,
- The sense of all the thoughts and unseen spires

That soared to heaven around him!

He stood there,

Obscure, unknown, the shadow of a man

In darkness, like a grey dishevelled ghost,

—Bare-throated, down at heel, his last night's supper

Littering his desk, untouched; his glimmering face,

Under his tangled hair, intent and still,—Preparing our new universe.

He caught

The sunbeam striking through that bullethole

In his closed shutter—a round white spot of light

Upon a small dark screen.

He interposed

A prism of glass. He saw the sunbeam break

And spread upon the screen its rainbow band

Of disentangled colours, all in scale Like notes in music; first, the violet ray, Then indigo, trembling softly into blue; Then green and yellow, quivering side by side;

Then orange, mellowing richly into red.

Then, in the screen, he made a small round hole

Like to the first; and through it passed once more

Each separate coloured ray. He let it strike

Another prism of glass, and saw each hue
Bent at a different angle from its path,
The red the least, the violet ray the most;
But all in scale and order, all precise
As notes in music. Last, he took a lens,
And, passing through it all those coloured
rays,

Drew them together again, remerging all On that dark screen, in one white spot of light.

So, watching, testing, proving, he resolved The seeming random glories of our day Into a constant harmony, and found

How in the whiteness of the sunlight sleep

Compounded, all the colours of the world.

He saw how raindrops in the clouds of heaven

Breaking the light, revealed that sevenfold arch

Of colours, ranged as on his own dark screen,

Though now they spanned the mountains and wild seas.

Then, where that old-world order had gone down

Beneath a darker deluge, he beheld

Gleams of the great new order and recalled

—Fraught with new meaning and a deeper hope—

That covenant which God made with all mankind

Throughout all generations: I will set

My bow in the cloud, that henceforth ye may know

How deeper than the wreckage of your dreams

Abides My law, in beauty and in power.

п.

Yet for that exquisite balance of the mind, He, too, must pay the price. He stood alone

Bewildered, at the sudden assault of fools On this, his first discovery.

"I have lost

The most substantial blessing of my quiet To follow a vain shadow.

I would fain

Attempt no more. So few can understand, Or read one thought. So many are ready at once

To swoop and sting. Indeed I would withdraw

For ever from philosophy." So he wrote In grief, the mightiest mind of that new age.

Let those who'd stone the Roman Curia For all the griefs that Galileo knew Remember the dark hours that well-nigh quenched

The splendour of that spirit. He could not sleep.

Yet, with that patience of the God in man That still must seek the Splendour whence it came,

Through midnight hours of mockery and defeat,

In loncliness and hopelessness and tears, He laboured on. He had no power to see How, after many years, when he was dead,

Out of this new discovery men should make

An instrument to explore the farthest stars And, delicately dividing their white rays, Divine what metals in their beauty burned, Extort red secrets from the heart of Mars, Or measure the molten iron in the sun. He bent himself to nearer, lowlier tasks;

N

And seeing, first, that those deflected rays,
Though it were only by the faintest bloom
Of colour, imperceptible to our eyes,
Must dim the vision of Galileo's glass,
He made his own new weapon of the sky,—
That first reflecting telescope which should
hold

In its deep mirror, as in a breathless pool The undistorted image of a star.

III.

In that deep night where Galileo groped Like a blind giant in dreams to find what power

Held moons and planets to their constant road

Through vastness, ordered like a moving fleet;

What law so married them that they could not clash

Or sunder, but still kept their rhythmic pace

As if those ancient tales indeed were true And some great angel helmed each gliding sphere;

Many had sought an answer. Many had caught

Gleams of the truth; and yet, as when a torch

Is waved above a multitude at night,

And shows wild streams of faces, all confused,

But not the single law that knits them all Into an ordered nation, so our skies

For all those fragmentary glimpses, whirled In chaos, till one eagle-spirit soared,

Found the one law that bound them all in one,

And through that awful unity upraised The soul to That which made and guides them all.

Did Newton, dreaming in his orchard there

Beside the dreaming Witham, see the moon

- Burn like a huge gold apple in the boughs
- And wonder why should moons not fall like fruit?
- Or did he see as those old tales declare
- (Those fairy-tales that gather form and fire
- Till, in one jewel, they pack the whole bright world)
- A ripe fruit fall from some immortal tree
- Of knowledge, while he wondered at what height
- Would this earth-magnet lose its darkling power?
- Would not the fruit fall earthward, though it grew
- High o'er the hills as yonder brightening cloud?
- Would not the selfsame power that plucked the fruit
- Draw the white moon, then, sailing in the blue?

Then, in one flash, as light and song are born,

And the soul wakes, he saw it—this dark earth

Holding the moon that else would fly through space

To her sure orbit, as a stone is held

In a whirled sling; and, by the selfsame power,

Her sister planets guiding all their moons; While, exquisitely balanced and controlled In one vast system, moons and planets wheeled

Around one sovran majesty the sun.

IV.

Light and more light! the spark from heaven was there,

The flash of that reintegrating fire

Flung from heaven's altars, where all light is born,

To feed the imagination of mankind

- With vision, and reveal all worlds in one.
- But let no dreamer dream that his great work
- Sprang, armed, like Pallas from the Thunderer's brain.
- With infinite patience he must test and prove
- His vision now, in those clear courts of Truth
- Whose absolute laws (bemocked by shallower minds
- As less than dreams, less than the faithless faith
- That fears the Truth, lest Truth should slay the dream)
- Are man's one guide to his transcendent heaven;
- For there's no wandering splendour in the soul,
- But in the highest heaven of all is one
- With absolute reality. None can climb
- Back to that Fount of Beauty but through pain.

- Long, long he toiled, comparing first the curves
- Traced by the cannon-ball as it soared and fell
- With that great curving road across the sky
- Traced by the sailing moon.

Was earth a loadstone

- Holding them to their paths by that dark force
- Whose mystery men have cloaked beneath a name?
- Yet, when he came to test and prove, he found
- That all the great deflections of the moon,
- Her shining cadences from the path direct,
- Were utterly inharmonious with the law
- Of that dark force, at such a distance acting,
- Measured from earth's own centre. . . .
- For three long years, Newton withheld his hope

Until that day when light was brought from France,

New light, new hope, in one small glistening fact,

Clear-cut as any diamond; and to him Loaded with all significance, like the point Of light that shows where constellations burn.

Picard in France—all glory to her name Who is herself a light among all lands— Had measured earth's diameter once more And with a new precision.

To the throng,

Those few corrected ciphers, his results
Were less than nothing; yet they changed
the world.

For Newton seized them and, with trembling hands,

Began to work his problem out anew.

Then, then, as on the page those figures turned

To hieroglyphs of heaven, and he beheld The moving moon, with awful cadences Falling into the path his law ordained,

Even to the foot and second, his hand shook

And dropped the pencil.

"Work it out for me,"

He cried to those around him; for the weight

Of that celestial music overwhelmed him;

And, on his page, those burning hieroglyphs

Were Thrones and Principalities and Powers . . .

For far beyond, immeasurably far

Beyond our sun, he saw that river of suns

We call the Milky Way, that glittering host

Powdering the night, each grain a solar blaze

Divided from its neighbour by a gulf

Too wide for thought to measure; each a sun

Huger than ours, with its own fleet of worlds,

Visible and invisible. Those bright throngs That seemed dispersed like a defeated host Through blindly wandering skies, now, at the word

Of one great dreamer, height o'er height revealed

Hints of a vaster order, and moved on In boundless intricacies of harmony Around one centre, deeper than all suns, The burning throne of God.

٧.

- He could not sleep. That intellect, whose wings
- Dared the cold ultimate heights of Space and Time
- Sank, like a wounded eagle, with dazed eyes
- Back, headlong through the clouds to throb on earth.
- What shaft had pierced him? That which also pierced

His great forebears—the hate of little men.

They flocked around him, and they flung their dust

Into the sensitive eyes, and laughed to see How dust could blind them.

If one prickling grain

Could so put out his vision and so torment

That delicate brain, what weakness! How the mind

That seemed to dwarf us, dwindles! Is he mad?

So buzzed the fools, whose ponderous mental wheels

Nor dust, nor grit, nor stones, nor rocks could irk

Even for an instant.

Newton could not sleep,

But all that careful malice could design

Was blindly fostered by well-meaning folly,

And great sane folk like Mr Samuel Pepys

Canvassed his weakness and slept sound all night.

For little Samuel with his rosy face

Came chirping into a coffee-house one day Like a plump robin, "Sir, the unhappy state

Of Mr Isaac Newton grieves me much.

Last week I had a letter from him, filled

With strange complainings, very curious hints,

Such as, I grieve to say, are common signs

—I have observed it often—of worse to come.

He said that he could neither eat nor sleep

Because of all the embroilments he was in, Hinting at nameless enemies. Then he begged

My pardon, very strangely. I believe Physicians would confirm me in my fears.

'Tis very sad. . . . Only last night, I found

Among my papers certain lines composed By—whom d'you think?—My lord of Halifax (Or so dear Mrs Porterhouse assured me)
Expressing, sir, the uttermost satisfaction
In Mr Newton's talent. Sir, he wrote
Answering the charge that science would
put out

The light of beauty, these very handsome lines:

"When Newton walked by Witham stream
There fell no chilling shade
To blight the drifting naiad's dream
Or make her garland fade.

The mist of sun was not less bright
That crowned Urania's hair.
He robbed it of its colder light,
But left the rainbow there."

They are very neat and handsome, you'll agree.

Solid in sense as Dryden at his best,
And smooth as Waller, but with something
more,—

That touch of grace, that airier elegance Which only rank can give.

'Tis very sad

That one so nobly praised should—well, no matter!—

I am told, sir, that these troubles all began

At Cambridge, when his manuscripts were burned.

He had been working, in his curious way,

All through the night; and, in the morning greyness

Went down to chapel, leaving on his desk

A lighted candle. You can imagine it,-

A sadly sloven altar to his Muse,

Littered with papers, cups, and greasy plates

Of untouched food. I am told that he would eat

His Monday's breakfast, sir, on Tuesday morning,

Such was his absent way!

When he returned,

He found that Diamond (his little dog

Named Diamond, for a black patch near his tail)

Had overturned the candle. All his work Was burned to ashes.

It struck him to the quick,

Though, when his terrier fawned about his feet,

He showed no anger. He was heard to say,

"O Diamond, Diamond, little do you know..."

But, from that hour, ah well, we'll say no more.

Halley was there that day, and spoke up sharply,

"Sir, there are hints and hints! Do. you mean more?"

—"I do, sir," chirruped Samuel, mightily pleased

To find all eyes, for once, on his fat face.

"I fear his intellects are disordered, sir."

- —"Good! That's an answer! I can deal with that.
- But tell me first," quoth Halley, "why he wrote
- That letter, a week ago, to Mr Pepys."
- —"Why, sir," piped Samuel, innocent of the trap.
- "I had an argument in this coffee-house
- Last week, with certain gentlemen, on the laws
- Of chance, and what fair hopes a man might have
- Of throwing six at dice. I happened to say
- That Mr Isaac Newton was my friend,
- And promised I would sound him."
 - "Sir," said Halley,
- "You'll pardon me, but I forgot to tell you
- I heard, a minute since, outside these doors,
- A very modish woman of the town, Or else a most delicious lady of fashion.

A melting creature with a bold black eye,

A bosom like twin doves; and, sir, a mouth

Like a Turk's dream of Paradise. She cooed,

'Is Mr Pepys within?' I greatly fear That they denied you to her!"

Off ran Pepys!

"A hint's a hint," laughed Halley, "and so to bed."

But, as for Isaac Newton, let me say,

Whatever his embroilments were, he solved

With just one hour of thought, not long ago

The problem set by Leibnitz as a challenge To all of Europe. He published his result Anonymously, but Leibnitz, when he sawit, Cried out, at once, old enemy as he was,

"That's Newton, none but Newton! From this claw

I know the old lion, in his midnight lair."
VOL. I.

VI.

(Sir Isaac Newton writes to Mrs Vincent at Woolthorpe.)

- Your letter, on my eightieth birthday, wakes
- Memories, like violets, in this London gloom.
- You have never failed, for more than threescore years,
- To send these annual greetings from the haunts
- Where you and I were boy and girl together.
- A day must come—it cannot now be far—
- When I shall have no power to thank you
 - for them,
- So let me tell you now that, all my life,
- They have come to me with healing in their wings
- Like birds from home, birds from the happy woods

Above the Witham, where you walked with me

When you and I were young.

Do you remember

Old Barley—how he tried to teach us drawing?

He found some promise, I believe, in you, But quite despaired of me.

I treasure all

Those little sketches that you sent to me

Each Christmas, carrying each some glimpse of home.

There's one I love that shows the narrow lane

Behind the schoolhouse, where I had that bout

Of schoolboy fisticuffs. I have never known

More pleasure, I believe, than when I beat That black-haired bully and won, for my reward,

Those April smiles from you.

I see you still

Standing among the fox-gloves in the hedge;

And just behind you, in the field, I know There was a patch of aromatic flowers,—

Rest-harrow, was it? Yes; their tangled roots

Pluck at the harrow; halt the sharp harrow of thought,

Even in old age. I never breathe their scent

But I am back in boyhood, dreaming there Over some book, among the diligent bees, Until you join me, and we dream together.

They called me lazy, then. Oddly enough It was that fight that stirred my mind to beat

My bully at his books, and head the 'school;

Blind rivalry, at first. By such fond tricks
The invisible Power that shapes us—not
ourselves—

Punishes, teaches, leads us gently on Like children, all our lives, until we grasp

- A sudden meaning and are born, through death
- Into full knowledge that our Guide was Love.
- Another picture shows those woods of ours,
- Around whose warm dark edges in the spring

Primroses, knots of living sunlight, woke;

And, always, you, their radiant shepherdess

From Elfland, lead them rambling back for me,

The dew still clinging to their golden fleece, Through these grey memory-mists.

Another shows

My old sun-dial. You say that it is known

As "Isaac's dial" still. I took great pains

To set it rightly. If it has not shifted 'Twill mark the time long after I am gone; Not like those curious water-clocks I made,

Do you remember? They worked well at first;

- But the least particles in the water clogged The holes through which it dripped; and so, one day,
- We two came home so late that we were sent
- Supperless to our beds; and suffered much
- From the world's harshness, as we thought it then.
- Would God that we might taste that harshness now.
- I cannot send you what you've sent to me;
- And so I wish you'll never thank me more
- For those poor gifts I have sent from year to year.
- I send another, and hope that you can use it
- To buy yourself those comforts which you need
- This Christmas-time.

How strange it is to wake

And find that half a century has gone by, With all our endless youth.

They talk to me
Of my discoveries, prate of undying fame
Too late to help me. Anything I achieved
Was done through work and patience;
and the men

Who sought quick roads to glory for themselves

Were capable of neither. So I won Their hatred, and it often hampered me, Because it vexed my mind.

This world of ours

Would give me all, now I have ceased to want it;

For I sit here, alone, a sad old man,
Sipping his orange-water, nodding to sleep,
Not caring any more for aught they say,
Not caring any more for praise or blame;
But dreaming—things we dreamed of, long
ago,

In childhood.

You and I had laughed away

That boy and girl affair. We were too poor

For anything but laughter.

I am old;

And you, twice wedded and twice widowed, still

Retain, through all your nearer joys and griefs,

The old affection. Vaguely our blind old hands

Grope for each other in this growing dark

And deepening loneliness,—to say "goodbye."

Would that my words could tell you all my heart;

But even my words grow old.

Perhaps these lines,

Written not long ago, may tell you more.

I have no skill in verse, despite the praise

Your kindness gave me, once; but since I wrote

Thinking of you, among the woods of home,

My heart was in them. Let them turn to yours:

Give me, for friends, my own true folk
Who kept the very word they spoke;
Whose quiet prayers, from day to day,
Have brought the heavens about my way.

Not those whose intellectual pride
Would quench the only lights that guide;
Confuse the lines 'twixt good and ill
Then throne their own capricious will;

Not those whose eyes in mockery scan
The deeper, simpler dreams of man;
Not those keen wits, so quick to hurt,
So swift to trip you in the dirt.

Not those who'd pluck your mystery out, Yet never saw your last redoubt; Whose cleverness would kill the song Dead at your heart, then prove you wrong. Give me those eyes I used to know

Where thoughts like angels come and go;

—Not glittering eyes, nor dimmed by books,

But eyes through which the deep soul
looks.

Give me the quiet hands and face
That never strove for fame and place;
The soul whose love, so many a day,
Has brought the heavens about my way.

VII.

Was it a dream, that low dim-lighted room
With that dark periwigged phantom of Dean
Swift

Writing, beside a fire, to one he loved,—
Beautiful Catherine Barton, once the light
Of Newton's house, and his half-sister's
child?

"Yes, Catherine Barton, I am brave enough

To face this pale, unhappy, wistful ghost

Of our departed friendship.

It was I

Savage and mad, a snarling kennel of sins, "Your Holiness," as you called me, with that smile

Which even your ghost would quietly turn on me—

Who raised it up. It has no terrors, dear, And I shall never lay it while I live.

You write to me. You think I have the power

To shield the fame of Newton from a lie.

Poor little ghost! You think I hold the keys

Not only of Parnassus, then, but hell.

There is a tale abroad that Newton owed His public office to Lord Halifax. •

Your secret lover. Coarseness, as you know,

Is my peculiar privilege. I'll be plain,

And let them wince who are whispering in the dark.

- They are hinting that he gained his public post
- Through you, his flesh and blood; and that he knew
- You were his patron's mistress!

Yes, I know

- The coffee-house that hatched it—to be scotched,
- Nay, killed, before one snuff-box could say "snap,"
- Had not one cold malevolent face been there
- Listening,—that crystal-minded lover of truth,
- That lucid enemy of all lies,—Voltaire.
- I am told he is doing much to spread the light
- Of Newton's great discoveries, there, in France.
- There's little fear that France, whose clear keen eyes
- Have missed no morning in the realm of thought,

- Would fail to see it; and smaller need to lift
- A brand from hell to illume the light from heaven.
- You fear he'll print his lie. No doubt of that.
- I can foresee the phrase, as Halley saw
- The advent of his comet,—jolie nièce,
- Assez aimable, . . . then he'll give your name
- As *Madame Conduit*, adding just that spice Of infidelity that the dates admit
- To none but these truth-lovers. It will be best
- Not to enlighten him, or he'll change his tale
- And make an answer difficult. Let him print
- This truth as he conceives it, and you'll need
- No more defence.
- All history then shall damn his death-cold lie

And show you for the laughing child you were

When Newton won his office.

For yourself

You say you have no fear. Your only thought

Is that they'll soil his fame. Ah yes, they'll try,

But they'll not hurt it. For all time to come

It stands there, firm as marble and as pure.

They can do nothing that the sun and rain

Will not erase at last. Not even Voltaire

Can hurt that noble memory. Think of him

As of a viper writhing at the base

Of some great statue. Let the venomous tongue

Flicker against that marble as it may It cannot wound it.

I am far more grieved

- For you, who sit there wondering now, too late,
- If it were some suspicion, some dark hint Newton had heard that robbed him of his
- And almost broke his mind up. I recall How the town buzzed that Newton had gone mad.
- You copy me that sad letter which he wrote
- To Locke, wherein he begs him to forgive The hard words he had spoken, thinking Locke
- Had tried to embroil him, as he says, with women;
- A piteous, humble letter.

Had he heard

- Some hint of scandal that he could not breathe
- To you, because he honoured you too well?
- I cannot tell. His mind was greatly troubled

- With other things. At least, you need not fear
- That Newton thought it true. He walked aloof,
- Treading a deeper, stranger world than ours. Have you not told me how he would forget Even to eat and drink, when he was wrapt In those miraculous new discoveries,
- And, under this wild maze of shadow and sun
- Beheld—though not the Master Player's hand—
- The keys from which His organ music rolls, Those visible symphonies of wild cloud and light
- Which clothe the invisible world for mortal eyes.
- I have heard that Leibnitz whispered to the court
- That Newton was an "atheist." Leibnitz knew
- His audience. He could stoop to it.

 Fools have said

- That knowledge drives out wonder from the world;
- They'll say it still, though all the dust's ablaze
- With miracles at their feet; while Newton's laws
- Foretell that knowledge one day shall be song,
- And those whom Truth has taken to her heart
- Find that it beats in music.

Even this age

- Has glimmerings of it. Newton never saw His own full victory; but at least he knew That all the world was linked in one again;
- And, if men found new worlds in years to come,
- These too must join the universal song.
- That's why true poets love him; and you'll find
- Their love will cancel all that hate can do.

- They are the sentinels of the House of Fame;
- And that quick challenging couplet from the pen
- Of Alexander Pope is answer enough
- To all those whisperers round the outer doors.
- There's Addison, too. The very spirit and thought
- Of Newton moved to music when he wrote The Spacious Firmament. Some keen-eyed age to come
- Will say, though Newton seldom wrote a verse,
- That music was his own and speaks his faith.
- And, last, for those who doubt his faith in God
- And man's immortal destiny, there remains
- The granite monument of his own great work,

That dark cathedral of man's intellect,
The vast 'Principia,' pointing to the skies,
Wherein our intellectual king proclaimed
The task of science,—through this wilderness

Of Time and Space and false appearances, To make the path straight from effect to cause,

Until we come to that First Cause of all,
The Power, above, beyond the blind
machine,

The Primal Power, the originating Power, Which cannot be mechanical. He affirmed it

With absolute certainty. Whence arises all

This order, this unbroken chain of law,
This human will, this death-defying love?
Whence, but from some divine transcendent Power,

Not less, but infinitely more than these, Because it is their Fountain and their Guide. Fools in their hearts have said, "Whence comes this Power,

Why throw the riddle back this one stage more?"

And Newton, from a height above all worlds

Answered and answers still:

"This universe

Exists, and by that one impossible fact
Declares itself a miracle; postulates
An infinite Power within itself, a Whole
Greater than any part, a Unity
Sustaining all, binding all worlds in one.
This is the Mystery, palpable here and now,
'Tis not the lack of links within the chain
From cause to cause, but that the chain
exists:

That's the unfathomable mystery,

The one unquestioned miracle that we know,

Implying every attribute of God, The ultimate, absolute, omnipresent Power, In its own being, deep and high as heaven.

- But men still trace the greater to the less, Account for soul with flesh and dreams with dust,
- Forgetting in their manifold world the One,
- In whom for every splendour shining here Abides an equal power behind the veil.
- Was the eye contrived by blindly moving atoms,
- Or the still-listening ear fulfilled with music
- By forces without knowledge of sweet sounds?
- Are nerves and brain so sensitively fashioned
- That they convey these pictures of the world
- Into the very substance of our life,
- While That from which we came, 'the Power that made us,
- Is drowned in blank unconsciousness of all?
- Does it not from the things we know appear

That there exists a Being, incorporeal,
Living, intelligent, who in infinite space,
As in His infinite sensory, perceives
Things in themselves, by His immediate
presence

Everywhere? Of which things, we see no more

Than images only, flashed through nerves and brain

To our small sensories?

What is all science then

But pure religion, seeking everywhere

The true commandments, and through many forms

The eternal power that binds all worlds in one?

It is man's age-long struggle to draw near His maker, learn His thoughts, discern His law,—

A boundless task, in whose infinitude,

As in the unfolding light and law of love,

Abides our hope, and our eternal joy.

- I know not how my work may seem to others——"
- So wrote our mightiest mind—"But to myself

I seem a child that, wandering all day long Upon the sea-shore, gathers here a shell,

And there a pebble, coloured by the wave,

While the great ocean of truth, from sky to sky

- Stretches before him, boundless, unexplored."
- He has explored it now, and needs of me Neither defence nor tribute. His own work
- Remains his monument. He rose at last so near

The Power divine that none can nearer go; None in this age! To carry on his fire We must await a mightier age to come.

VI.

WILLIAM HERSCHEL CONDUCTS.

Was it a dream?—that crowded concertroom

In Bath; that sea of ruffles and laced coats;

And William Herschel, in his powdered wig, Waiting upon the platform, to conduct

His choir and Linley's orchestra? He stood Tapping his music-rest, lost in his own thoughts

And (did I hear or dream them?) all were mine:

My periwig's askew, my ruffle stained
With grease from my new telescope!

Ach, to-morrow

How Caroline will be vexed, although she grows

Almost as bad as I, who cannot leave My workshop for one evening.

I must give

One last recital at St Margaret's,

And then—farewell to music.

Who can lead

Two lives at once?

Yet—it has taught me much,

Thrown curious lights upon our world, to pass

From one life to another. Much that I took

For substance turns to shadow. I shall see

No throngs like this again; wring no more praise

Out of their hearts; forego that instant joy

—Let those who have not known it count

et those who have not known it count it vain—

When human souls at once respond to yours.

Here, on the brink of fortune and of fame, As men account these things, the moment comes

When I must choose between them and the stars;

And I have chosen.

Handel, good old friend,

We part to-night. Hereafter, I must watch

That other wand, to which the worlds keep time.

What has decided me? That marvellous night

When—ah, how difficult it will be to guide, With all these wonders whirling through my brain!—

After a Pump-room concert I came home Hot-foot, out of the fluttering sea of fans, Coquelicot-ribboned belles and periwigged beaux,

To my Newtonian telescope.

The design

Was his; but more than half the joy my own,

Because it was the work of my own hand, A new one, with an eye six inches wide, Better than even the best that Newton made.

Then, as I turned it on the *Gemini*,
And the deep stillness of those constant lights,

Castor and Pollux, lucid pilot-stars,
Began to calm the fever of my blood,
I saw, O, first of all mankind I saw
The disk of my new planet gliding there
Beyond our tumults, in that realm of
peace.

What will they christen it? Ach—not Herschel, no!

Nor Georgium Sidus, as I once proposed; Although he scarce could lose it, as he lost That world in 'seventy-six.

Indeed, so far From trying to tax it, he has granted me How much?—two hundred golden pounds a year,

In the great name of science,—half the cost Of one state-coach, with all those worlds to win!

Well—well—we must be grateful. This mad king

Has done far more than all the worldly-wise, Who'll charge even this to madness.

I believe

One day he'll have me pardoned for that . . . crime,

When I escaped—deserted, some would say—

From those drill-sergeants in my native land;

Deserted drill for music, as I now

Desert my music for the orchestral spheres.

No. This new planet is only new to man.

His majesty has done much. Yet, as my friend

Declared last night, "Never did monarch buy

- Honour so cheaply"; and—he has not bought it.
- I think that it should bear some ancient name,
- And wear it like a crown; some deep, dark name,
- Like Uranus, known to remoter gods.
- How strange it seems—this buzzing concert-room!
- There's Doctor Burney bowing and, behind him,
- His fox-eyed daughter Fanny.

Is it a dream,

- These crowding midgets, dense as clustering bees
- In some great bee-skep?

Now, as I lift my wand,

- A silence grips them, and the strings begin,
- Throbbing. The faint lights flicker in gusts of sound.
- Before me, glimmering like a crescent moon,

The dim half circle of the choir awaits Its own appointed time.

Beside me now,

Watching my wand, plump and immaculate

From buckled shoes to that white bunch of lace

Under his chin, the midget tenor rises, Music in hand, a linnet and a king. The bullfinch bass, that other emperor, Leans back indifferently, and clears his

throat

As if to say, "This prelude leads to Me!"

While, on their own proud thrones, on either hand,

The sumptuously bosomed midget queens, Contralto and soprano, jealously eye Each other's plumage.

Round me the music throbs
With an immortal passion. I grow aware
Of an appalling mystery. . . . We, this
throng

Of midgets, playing, listening, tense and still,

Are sailing on a midget ball of dust

We call our planet; will have sailed through space

Ten thousand leagues before this music ends.

What does it mean? O, God, what can it mean?—

This weird hushed ant-hill with a thousand eyes;

These midget periwigs; all those little blurs,

Tier over tier, of faces, masks of flesh,

Corruptible, hiding each its hopes and dreams,

Its tragi-comic dreams.

And all this throng

Will be forgotten, mixed with dust, crushed out,

Before this book of music is outworn

Or that tall organ crumbles. Violins

Outlast their players. Other hands may touch

That harpsichord; but ere this planet makes

Another threescore journeys round its sun, These breathing listeners will have vanished. Whither?

I watch my moving hands, and they grow strange!

What is it moves this body? What am I? How came I here, a ghost, to hear that voice

Of infinite compassion, far away,
Above the throbbing strings, hark! Comfort ye . . .

If music lead us to a cry like this,
I think I shall not lose it in the skies.
I do but follow its own secret law
As long ago I sought to understand
Its golden mathematics; taught myself
The way to lay one stone upon another,
Before I dared to dream that I might
build

My Holy City of Song. I gave myself

To all its branches. How they stared at me, Those men of "sensibility," when I said That algebra, conic sections, fluxions, all Pertained to music. Let them stare again. Old Kepler knew, by instinct, what I now Desire to learn. I have resolved to leave No tract of heaven unvisited.

To-night,

The music carries me back to it again !—
I see beyond this island universe,
Beyond our sun, and all those other suns
That throng the Milky Way, far, far beyond,

A thousand little wisps, faint nebulæ, Luminous fans and milky streaks of fire; Some like soft brushes of electric mist Streaming from one bright point; others that spread

And branch, like growing systems; others discrete,

Keen, ripe, with stars in clusters; others drawn back

By central forces into one dense death, vol. 1. Q

Thence to be kindled into fire, reborn,

And scattered abroad once more in a delicate spray

Faint as the mist by one bright dewdrop breathed

At dawn, and yet a universe like our own; Each wisp a universe, a vast galaxy Wide as our night of stars.

The Milky Way

In which our sun is drowned, to these would seem

Less than to us their faintest drift of haze; Yet we, who are borne on one dark grain of dust.

Around one indistinguishable spark

Of star-mist, lost in one lost feather of light,

Can by the strength of our own thought, ascend

Through universe after universe; trace their growth

Through boundless time, their glory, their decay;

- And, on the invisible road of law, more firm
- Than granite, range through all their length and breadth.
- Their height and depth, past, present, and to come.
- So. those who follow the great Workmaster's law
- From small things up to great, may one day learn
- The structure of the heavens, discern the whole
- Within the part, as men through Love see God.
- Oh, holy night, deep night of stars, whose peace
- Descends upon the troubled mind · like dew.
- Healing it with the sense of that pure reign
- Of constant law, enduring through all change;

Shall I not, one day, after faithful years, Find that thy heavens are built on music, too,

And hear, once more, above thy throbbing worlds

This voice of all compassion, Comfort ye,—Yes—comfort ye, my people, saith your God?

VII.

SIR JOHN HERSCHEL REMEMBERS.

TRUE type of all, from his own father's hand

He caught the fire; and, though he carried it far

Into new regions; and, from southern fields

Of yellow lupin, added host on host

To those bright armies which his father knew.

Surely the crowning hour of all his life

Was when, his task accomplished, he returned

A lonely pilgrim to the twilit shrine Of first beginnings and his father's youth There, in the Octagon Chapel, with bared head

Grey, honoured for his father and himself,

He touched the glimmering keyboard, touched the books

Those dear lost hands had touched so long ago.

"Strange that these poor inanimate things outlast

The life that used them.

Yes. I should like to try

This good old friend of his. You'll leave me here

An hour or so?"

His hands explored the stops;

And, while the music breathed what else were mute,

His mind through many thoughts and memories ranged.

Picture on picture passed before him there

In living colours, painted on the gloom:

Not what the world acclaimed, the great work crowned,

But all that went before, the years of toil; The years of infinite patience, hope, despair.

He saw the little house where all began,

His father's first resolve to explore the sky,

His first defeat, when telescopes were found

Too costly for a music-master's purse;

And then that dogged and all-conquering will

Declaring, "Be it so. I'll make my own,

A better than even the best that Newton made."

He saw his first rude telescope—a tube

Of pasteboard, with a lens at either end;

And then,—that arduous growth to size and power

With each new instrument, as his knowledge grew;

And, to reward each growth, a deeper heaven.

- He saw the good Aunt Caroline's dismay
- When her trim drawing-room, as by wizardry, turned
- Into a workshop, where her brother's hands
- Cut, ground and burnished, hour on aching hour,
- Month after month, new mirrors of the sky.
- Yet, while from dawn to dark her brother moved
- Around some new-cut mirror, burnishing it,
- Knowing that if he once removed his hands
- The surface would be dimmed and must forego
- Its heaven for ever, her quiet hands would raise
- Food to his lips; or, with that musical voice
- Which once—for she, too, offered her sacrifice—

Had promised her fame, she whiled away the hours

Reading how, long ago, Aladdin raised The djinns, by burnishing that old battered lamp;

Or, from Cervantes, how one crazy soul Tilting at windmills, challenged a purblind world.

He saw her seized at last by that same fire,

Burning to help, a sleepless Vestal, dowered With lightning-quickness, rushing from ... desk to clock,

Or measuring distances at dead of night Between the lamp-micrometer and his eyes.

He saw her in mid-winter, hurrying out,
A slim shawled figure through the drifted snow,

To help him; saw her fall with a stifled cry,

Gashing herself upon that buried hook,

And struggling up, out of the blood-stained drift,

To greet him with a smile.

" For any soldier,

This wound," the surgeon muttered, "would have meant

Six weeks in hospital."

Not six days for her!

"I am glad these nights were cloudy, and we lost

So little," was all she said.

Sir John pulled out

Another stop. A little ironical march

Of flutes began to goose-step through the gloom.

He saw that first "success"! Ay, call it so!

The royal command,—the court desires to see

The planet Saturn and his marvellous rings On Friday night. The skies, on Friday night,

- Were black with clouds. "Canute me no Canutes."
- Muttered their new magician, and unpacked
- His telescope. "You shall see what you can see "
- He levelled it through a window; and they saw
- "Wonderful! Marvellous! Glorious! Eh, what, what!"
- A planet of paper, with a paper ring,
- Lit by a lamp, in a hollow of Windsor Park.
- Among the ferns, where Herne the Hunter walks.
- And Falstaff found that fairies live on cheese.
- Thus all were satisfied; while, above the clouds-
- The thunder of the pedals reaffirmed—
- The Titan planet, every minute, rolled
- Three hundred leagues upon his awful way.

Then, through that night, the vox humana spoke

With deeper longing than Lucretius knew When, in his great third book, the sombre

chant

Kindled and soared on those exultant wings,

Praising the master's hand from which he, too,

—Father, discoverer, hero—caught the fire.

It spoke of those vast labours, incomplete,

But, through their incompletion, infinite

In beauty, and in hope; the task bequeathed

From dying hand to hand.

Close to his grave

Like a memento mori stood the hulk

Of that great weapon rusted and outworn,

Which once broke down the barriers of the sky.

"Perrupit claustra"; yes, and bridged their gulfs;

For, far beyond our solar scheme, it showed

The law that bound our planets binding still

Those coupled suns which year by year he watched

Around each other circling.

Had our own

Some distant comrade, lost among the stars?

Should we not, one day, just as Kepler drew

His planetary music and its laws

From all those faithful records Tycho made.

Discern at last what vaster music rules

The vaster drift of stars from deep to deep;

Around what awful Poles, those wisps of light

Those fifteen hundred universes move?

One signal, even now, across the dark,

Declared their worlds confederate with our own;

For, carrying many secrets, which we now Slowly decipher, one swift messenger comes Across the abyss . . .

The light that, flashing through the immeasurable,

From universe to universe proclaims

The single reign of law that binds them all.

We shall break up those rays and, in their lines

And colours, read the history of their stars.

Year after year, the slow sure records grow,

Awaiting their interpreter. They shall see it,

Our sons, in that far day, the swift, the strong,

The triumphing young-eyed runners with the torch.

No deep-set boundary-mark in Space or Time

Shall halt or daunt them. Who that once has seen

How truth leads on to truth, shall ever dare

To set a bound to knowledge?

"Would that he knew"

—So thought the visitant at that shadowy shrine—

"Even as the maker of a song can hear

With the soul's ear, far off, the unstricken chords

To which, by its own inner law, it climbs,

Would that my father knew how younger hands

Completed his own planetary tune;

How from the planet that his own eyes found The mind of man would plunge into the dark,

And, blindfold, find without the help of eyes .

A mightier planet, in the depths beyond."

Then, while the reeds, with quiet melodious pace

Followed the dream, as in a picture passed,

Adams, the boy at Cambridge, making his vow

By that still lamp, alone in that deep night, Beneath the crumbling battlements of St John's,

To know why Uranus, uttermost planet known,

Moved in a rhythm delicately astray

From all the golden harmonies ordained

By those known measures of its sisterworlds.

Was there an unknown planet, far beyond, Sailing through unimaginable deeps
And drawing it from its path?

Then challenging chords
Echoed the prophecy that Sir John had
made,

Guided by his own faith in Newton's law: We have not found it, but we feel it trembling Along the lines of our analysis now As once Columbus, from the shores of Spain, Felt the new Continent.

Then, in swift fugues, began

A race between two nations for the prize Of that new world.

Le Verrier in France, Adams in England, each of them unaware Of his own rival, at the selfsame hour Resolved to find it.

Not by the telescope now! Skies might be swept for zons ere one spark

Among those myriads were both found and seen

To move, at that vast distance round our sun.

They worked by faith in law alone. They knew

The wanderings of great Uranus, and they knew

The law of Newton.

By the midnight lamp,

R

Pencil in hand, shut in a four-walled room,

Each by pure thought must work his problem out,—

- Given that law, to find the mass and place
- Of that which drew their planet from his course.
- There were no throngs to applaud them. Each alone,
- Without the heat of conflict laboured on,
- Consuming brain and nerve; for throngs applaud
- Only the flash and tinsel of their day,
- Never the quiet runners with the torch.
- Night after night they laboured. Line on line
- Of intricate figures, moving all in law,
- They marshalled. Their long columns formed and marched
- From battle to battle, and no sound was heard
- Of victory or defeat. They marched through snows
- Bleak as the drifts that broke Napoleon's pride

And through a vaster desert. They drilled their hosts

With that divine precision of the mind To which one second's error in a year Were anarchy, that precision which is felt Throbbing through music.

Month on month they toiled, With worlds for ciphers. One rich autumn night

Brooding over his figures there alone In Cambridge, Adams found them moving all

To one solution. To the unseeing eye His long neat pages had no more to tell Than any merchant's ledger, yet they shone

With epic splendour, and like trumpets pealed;

Three hundred million leagues beyond the path

Of our remotest planet, drowned in night Another and a mightier planet rolls; In volume, fifty times more vast than earth, And of so huge an orbit that its year
Wellnigh outlasts our nations. Though it
moves

A thousand leagues an hour, it has not ranged

Thrice through its seasons since Columbus sailed,

Or more than once since Galileo died.

He took his proofs to Greenwich. "Sweep the skies

Within this limited region now," he said.

"You'll find your moving planet. I'm not more

Than one degree in error."

He left his proofs;

But Airy, king of Greenwich, looked askance

At unofficial genius in the young,

And pigeon-holed that music of the spheres.

Nine months he waited till Le Verrier, too, Pointed to that same region of the sky.

Then Airy, opening his big sleepy lids,

Bade Challis use his telescope,—too late,

To make that honour all his country's own;

For all Le Verrier's proofs were now with Galle

Who, being German, had his star-charts ready

And, in that region, found one needlepoint

Had moved. A monster planet!

Honour to France!

Honour to England, too, the cry began,

Who found it also, though she drowsed at Greenwich.

So—as the French said, with some sting in it—

"We gave the name of Neptune to our prize

Because our neighbour England rules the sea."

"Honour to all," say we; for, in these wars,

Whoever wins a battle wins for all.

But, most of all, honour to him who found

The law that was a lantern to their feet,— Newton, the first whose thought could soar beyond

The bounds of human vision and declare, "Thus saith the law of Nature and of God Concerning things invisible."

This new world

What was it but one harmony the more
In that great music which himself had
heard,—

The chant of those reintegrated spheres

Moving around their sun, while all things

moved

Around one deeper Light, revealed by law, Beyond all vision, past all understanding, Yet darkly shadowed forth for dreaming men

On earth in music . . .

Music, all comes back. To music in the end.

Then, in the gloom

- Of the Octagon Chapel, the dreamer lifted up
- His face, as if to all those great forebears.
- The quivering organ rolled upon the dusk
- His dream of that new symphony,—the sun
- Chanting to all his planets on their way
- While, stop to stop replying, height o'er height,
- His planets answered, voices of a dream:

THE SUN.

- Light, on the far faint planets that attend me!
 - Light! But for me—the fury and the fire.
- My white-hot maelstroms, the red storms that rend me
- Can yield them still the harvest they desire.

- I kiss with light their sunward-lifted faces.
 With dew-drenched flowers I crown their
 - dusky brows.
- They praise me, lightly, from their pleasant places.
 - Their birds belaud me, lightly, from their boughs.
- And men, on lute and lyre, have breathed their pleasure.
 - They have watched Apollo's golden chariot roll;
- Hymned his bright wheels, but never mine that measure
 - A million leagues of flame from Pole to Pole.
- Like harbour-lights the stars grow wide before me,
 - I draw my worlds ten thousand leagues a day.
- Their far blue seas like April eyes adore me.

 They follow, dreaming, on my soundless way.

- How should they know, who wheel around my burning,
 - What torments bore them, or what power am I.
- I, that with all those worlds around me turning,
 - Sail, every hour, from sky to unplumbed sky?
- My planets, these live embers of my passion.
 - These children of my hurricanes of flame.
- Flung thro' the night, for midnight to refashion.
 - Praise, and forget, the splendour whence they came.

THE EARTH.

Was it a dream that, in those bright dominions, Are other worlds that sing, with lives like mine.

Lives that with beating hearts and broken pinions

Aspire and fall, half-mortal, half-divine?

A grain of dust among those glittering legions—

Am I, I only, touched with joy and tears?
O, silver sisters, from your azure regions,
Breathe, once again, your music of the
spheres:—

VENUS.

A nearer sun, a rose of light arises,

To clothe my glens with richer clouds of
flowers.

To paint my clouds with ever new surprises

And wreathe with mist my rosier domes and towers:

Where now, to praise their gods, a throng assembles

Whose hopes and dreams no sphere but mine has known.

- On other worlds the same warm sunlight trembles:
 - But life, love, worship, these are mine alone.

MARS.

- And now, as dewdrops in the dawn-light glisten,
 - Remote and cold—see—Earth and Venus roll.
- We signalled them—in music! Did they listen?
 - Could they not hear those whispers of the soul?
- May not their flesh have sealed that fount of glory,
 - That pure ninth sense which told us of mankind?
- Can some deep sleep bereave them of our story
- As darkness hides all colours from the blind?

JUPITER.

- I that am sailing deeper skies and dimmer, Twelve million leagues beyond the path of Mars,
- Salute the sun, that cloudy pearl, whose glimmer
 - Renews my spring and steers me through the stars.
- Think not that I by distances am darkened.
 - My months are years; yet light is in mine eyes.
- Mine eyes are not as yours. Mine ears have hearkened
 - To sounds from earth. Five moons enchant my skies.

SATURN.

And deeper yet, like molten opal shining My belt of rainbow glory softly streams,

- And seven white moons around me intertwining
 - Hide my vast beauty in a mist of dreams.
- Huge is my orbit; and your flickering planet
 - A mote that flecks your sun, that faint white star:
- Yet, in my magic pools, I still can scan it:

For I have ways to look on worlds afar.

URANUS.

- And deeper yet—twelve million leagues of twilight
 - Divide mine empire even from Saturn's ken.
- Is there a world whose light is not as my light,
 - A midget world of light-imprisoned men?

- Shut from this inner vision that hath found me,
 - They hunt bright shadows, painted to betray;
- And know not that, because their night hath drowned me,
 - My giants walk with gods in boundless day.

NEPTUNE.

- Plunge through immensity anew and find me.
 - Though scarce I see your sun,—that dying spark—
- Across a myriad leagues it still can bind me
 - To my sure path, and steer me through the dark.
- I sail through vastness, and its rhythms hold me,
 - Though threescore earths could in my volume sleep!

- Whose are the might and music that enfold me?
 - Whose is the law that guides me thro' the Deep?

THE SUN.

- I hear their song. They wheel around my burning!
- I know their orbits; but what path have I?

 I that with all those worlds around me turning
 Sail, every hour, ten thousand leagues of
 sky?
- My planets, these live embers of my passion, And I, too, filled with music and with flame,
- Flung thro' the night, for midnight to refashion,
 - Praise and forget the splendour whence we came.

EPILOGUE.

- ONCE more upon the mountain's lonely height
- I woke, and round me heard the sea-like sound
- Of pine-woods, as the solemn night-wind washed
- Through the long canyons and precipitous gorges
- Where coyotes moaned and eagles made their nest.
- Once more, far, far below, I saw the lights
- Of distant cities, at the mountain's feet, Clustered like constellations . . .
- Over me, like the dome of some strange shrine,
- Housing our great new weapon of the sky,

And moving on its axis like a moon Glimmered the new Uraniborg.

Shadows passed

Like monks, between it and the low grey walls

That lodged them, like a fortress in the rocks,

Their monastery of thought.

A shadow neared me.

I heard, once more, an eager living voice:

"Year after year, the slow sure records grow.

I wish that old Copernicus could see

How, through his truth, that once dispelled a dream,

Broke the false axle-trees of heaven, destroyed

All central certainty in the universe,

And seemed to dwarf mankind, the spirit of man

Laid hold on law, that Jacob's-ladder of light,

VOL. I.

And mounting, slowly, surely, step by step,

Entered into its kingdom and its power.
For just as Tycho's tables of the stars
Within the bounds of our own galaxy
Led Kepler to the music of his laws,
So, father and son, the Herschels, with
their charts

Of all those fire-mists, those faint nebulæ, Those hosts of drifting universes, lead Our new discoverers to yet mightier laws Enthroned above all worlds.

We have not found them,
And yet—only the intellectual fool
Dreams in his heart that even his brain
can tick

In isolated measure, a centre of law, Amidst the whirl of universal chaos.

For law descends from law. Though all the spheres

Through all the abysmal depths of Space were blown

Like dust before a colder darker wind

Than even Lucretius dreamed, yet if one thought,

One gleam of law within the mind of man, Lighten our darkness, there's a law beyond;

And even that tempest of destruction moves

To a mightier music, shatters its myriad worlds

Only to gather them up, as a shattered wave

Is gathered again into a rhythmic sea,

Whose ebb and flow are but the pulse of Life,

In its creative passion.

The records grow

Unceasingly, and each new grain of truth Is packed, like radium, with whole worlds of light.

The eclipses timed in Babylon help us now To clock that gradual quickening of the moon,

Ten seconds in a century.

Who that wrote

- On those clay tablets could foresee his gift
- To future ages; dreamed that the groping mind,
- Dowered with so brief a life, could ever range
- With that divine precision through the abyss?
- Who, when that good Dutch spectaclemaker set
- Two lenses in a tube, to read the time
- Upon the distant clock-tower of his church,
- Could dream of this, our hundred-inch, that shows
- The snow upon the polar caps of Mars
- Whitening and darkening as the seasons •change?
- Or who could dream when Galileo watched His moons of Jupiter, that from their
- His moons of Jupiter, that from their eclipses
- And from that change in their appointed times,

Now late, now early, as the watching earth

Farther or nearer on its orbit rolled,

The immeasurable speed of light at last

Should be reduced to measure?

Could Newton dream

When, through his prism, he broke the pure white shaft

Into that rainbow band, how men should gather

And disentangle ray by delicate ray

The colours of the stars,—not only those

That burn in heaven, but those that long since perished,

Those vanished suns that eyes can still behold,

The strange lost stars whose light still reaches earth

Although they died ten thousand years ago.

Here, night by night, the innumerable heavens

Speak to an eye more sensitive than man's,

Write on the camera's delicate retina

A thousand messages, lines of dark and bright

That speak of elements unknown on earth.

How shall men doubt, who thus can read the Book

Of Judgment, and transcend both Space and Time,

Analyse worlds that long since passed away,

And scan the future, how shall they doubt His power

From whom their power and all creation came?"

I think that, when the second Herschel tried

Those great hexameters in our English tongue,

A nobler shield than ever Achilles knew

Shone through the song and made his' echoes live:

"There he depicted the earth, and the canopied sky, and the sea-waves,

- There the unwearied sun, and the full-orbed moon in their courses,
- All the configured stars that gem the circuit of heaven,
- Pleiads and Hyads were there and the giant force of Orion,
- There the revolving Bear, which the Wain they call, was ensculptured,
- Circling on high, and in all his courses regarding Orion,
- Sole of the starry train that descends not to bathe in the ocean."

A nobler shield for us, a deeper sky;
But even to us who know how far away
Those constellations burn, the wonder
bides

That each vast sun can speed through the abyss

Age after age more swiftly than an eagle, Each on its different road, alone like ours With its own satellites; yet, since Homer sang, Their aspect has not altered! All their flight

Has not yet changed the old pattern of the Wain.

The sword-belt of Orion is not sundered.

Nor has one fugitive splendour broken yet From Cassiopeia's throne.

A thousand years

Are but as yesterday, even unto these.

How shall men doubt His empery over time

Whose dwelling is a deep so absolute

That we can only find Him in our souls.

For there, despite Copernicus, each may find

The centre of all things. There He lives and reigns.

There infinite distance into nearness grows,

And infinite majesty stoops to dust again;

All things in little, infinite love in man . . .

Oh, beating wings, descend to earth once more,

And hear, reborn, the desert singer's cry:

- When I consider the heavens, the work of Thy fingers,
- The sun and the moon and the stars which Thou hast ordained,
- Though man be as dust, I know Thou art mindful of him;
- And, through Thy law, Thy light still visiteth him.

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